UC-NRLF

B 3 228 458

1908

LIBRARY
OF THE
UNIVERSITY OF CALIFORNIA.

RECEIVED BY EXCHANGE

Class

Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

PUBLICATIONS OF THE UNIVERSITY OF MANCHESTER

ECONOMIC SERIES—N^o. VIII.

GARTSIDE REPORTS ON INDUSTRY AND COMMERCE. No. 5.

American Business Enterprise

EXCHANGE

SHERRATT & HUGHES

Publishers to the Victoria University of Manchester

Manchester; 34 Cross Street

London: 60 Chandos Street W.C.

American Business Enterprise

A STUDY IN INDUSTRIAL ORGANISATION

A REPORT

*To the Electors of the Gartside Scholarships on the results of a
Tour in the United States in 1906-7*

BY

DOUGLAS KNOOP, M.A.

Gartside Scholar

MANCHESTER

AT THE UNIVERSITY PRESS

1907

UNIVERSITY OF MANCHESTER PUBLICATIONS
No. XXX.

THE GARTSIDE REPORTS.

THE Gartside Reports are the reports made by the Gartside Scholars at the University of Manchester. The Gartside Scholarships were established in 1902 for a limited period, by John Henry Gartside, Esq., of Manchester. They are tenable for two years and about three are awarded each year. They are open to males of British nationality who at the date of the election shall be over the age of eighteen years and under the age of twenty-three years.

Every scholar must enter the University of Manchester for one Session for a course of study approved by the electors. The remainder of the time covered by the scholarship must be devoted to the examination of subjects bearing upon Commerce or Industry in Germany or Switzerland, or in the United States of America, or partly in one of the above-mentioned countries and partly in others, but the electors may on special grounds allow part of this period of the tenure of the Scholarship to be spent in study and travel in some other country or countries. It is intended that each scholar shall select some industry, or part of an industry, or some business, for examination and investigate this comparatively in the United Kingdom and abroad. The first year's work at the University of Manchester is designed to prepare the student for this investigation, and it partly takes the form of directed study from publications and by direct investigation, of English conditions with regard to the industrial or commercial subjects upon which research will be made abroad in the second year of the scholarship. Finally each scholar must present a report upon the matters that he has had under examination. The reports will as a rule be published.

The value of a scholarship is about £80 a year for the time spent in England, £150 a year for time spent on the Continent of Europe, and about £250 a year for time spent in America.

PREFACE.

THE Report which follows contains some of the general impressions which I gained after travelling for about nine months in Canada and the United States of America. Most of my time was spent in the large cities of the East, where I came in touch with various members of the business community, and had frequent opportunities of appreciating how close is the relationship between university and commercial life. I made no attempt to investigate the conditions of any particular industry, but devoted my attention to such points as seemed to lend themselves for inquiry. This course was probably the most interesting and instructive at the time, but it has rendered the writing of a report very difficult, as it has not been possible to make many definite statements, or to enter into much detail.

All the gentlemen I met in Canada and the United States were so anxious to make my stay on the other side of the Atlantic pleasant and instructive, that I cannot thank them sufficiently for their thoughtfulness and for the trouble they took on my behalf. My obligations are so numerous that I hardly venture to enumerate them, for fear of omitting to make suitable acknowledgements to some of those who kindly helped me in acquiring information, which has been used in writing this report, but I cannot let this opportunity pass without thanking the following gentlemen for the assistance they gave me:—Dr. Geo. E. Barnett, Baltimore; Mr. R. A. Batley, Montreal; Mr. W. J. Battison, Boston; Mr. P. T. Cherington, Philadelphia; Mr. J. W. Clark, Newark; Dr. E. D. Durand, Washington; Prof. J. H. Hollander, Baltimore; Dr. E. R. Johnson, Philadelphia; Dr. E. S. Meade, Philadelphia; Dr. A. C. Muhse,

Washington; Mr. W. P. Neel, New York; Dr. C. P. Neill, Washington; Mr. L. G. Powers, Washington; Mr. I. Putman, New York; Mr. H. Sheldon, Cleveland; Mr. R. B. Symington, New York; Prof. F. W. Taussig, Cambridge, Mass; Mr. F. W. Taylor, Philadelphia; Mr. F. A. Vanderlip, New York; and Mr. O. G. Villard, New York. Further, there remains the pleasant duty of expressing my obligations to Professor Chapman, of the Manchester University, for the constant advice and help which he gave me during my tenure of the Gartside Scholarship and whilst preparing this report; and to my parents for undertaking the correction of the proofs, whilst I was away from England on business.

The Report which follows is essentially intended for the general reader, and I have sought to exclude all expressions of a technical character. It attempts to give a short account of American business enterprise, and occasionally mention is made of conditions in England for purposes of comparison. The whole is but a sketch at best, and I trust that the reader will judge it as such.

D. K.

CONTENTS.

CHAPTER I.

PAGE

INTRODUCTORY REMARKS	...	...	...	...	...	1

PART I.

CHAPTER II.

BUSINESS ENTERPRISE.

American attitude towards business—Class distinctions in the United States—Students working their way through college—University graduates in industry and commerce—Commercial courses for business men—Labour saving devices in commerce—The place of advertising in business enterprise—The importance of incorporated companies—Differences between English and American companies—Reasons for the extension of joint stock management—Influence of company organisation on the efficiency of management—The basis of capitalisation of corporations—The underwriting syndicate—Short time notes—Convertible bonds—Influence of corporate management on employees—Large partnership concerns—Concluding remarks	...	...	...	...	...	7

PART II.

CHAPTER III.

THE ESTABLISHMENT AND THE SCALE OF INDUSTRIAL CONCERNS.

Units of efficient production—Some economies of large scale production—The size of industrial concerns—The undertaking of various functions by manufacturers—The development of retail marketing—Two classes of articles of domestic consumption—Multiple stores—Department stores—Specialisation and its limitations	...	37

CHAPTER IV.

INTEGRATION AND SUBSIDIARY WORK.

PAGE

The nature of subsidiary work and of integral processes— Causes of integration—Limitations of supplies of raw material—The opening up of a new field—Superior quality of raw material required—Direct economies of integration—Limits of integration—The tendency towards differentiation—Financial and labour aspects of integration—Subsidiary work dependent on large scale production—The influence of localisation upon sub- sidiary work—The manufacture of special equipment— Other examples of subsidiary work	 49

CHAPTER V.

THE ESTABLISHMENT OF RETAIL STORES BY MANUFACTURERS.

The sale of mechanical specialties—Boot and shoe manu- facturers' shops—The retail stores of the Tobacco Trust—The United Cigar Stores Company—The United Cigar Stands Company—The National Cigar Stands Company—The chocolate and candy business— Manufacturers with single retail stores—The "Mail- order" system	 61

CHAPTER VI.

THE CONTROL OF RETAIL PRICES BY MANUFACTURERS.

The use of trade marks, etc.—The reasons for which the manufacturer desires to regulate retail prices—Self- protection—To facilitate charging different prices in different parts of the same country—The English book trade—The American book trade—The United Shoe Machinery Company—Photographic materials—Silver- ware—Sewing cotton—Boots and shoes—Collars and cuffs—Baking powder	 67

CHAPTER VII.

THE MANUFACTURE AND MARKETING OF RELATED PRODUCTS.

The desire of the manufacturer to obtain a steady demand for his products—The use of the same labour and machinery for making different products—Illustrations from the automobile industry—Other examples—Con- siderations of marketing facilities may indicate line of extension of works—Various illustrations—Undertaking a new function to please customers—The manufacture of competing products—The sale of related articles	... 74

CONTENTS

xi

CHAPTER VIII.

THE POSITION OF THE MIDDLEMAN. PAGE

Three classes of middlemen—Manufacturers' insufficient capital—The growth of direct marketing by manufacturers—The disappearance of line of demarcation between wholesalers and retailers—The position of the middleman in the retail industries—The difference between a broker and a commission man—Conditions in the boot and shoe industry—The marketing of grocery products—Biscuits—Sugar—The sale of oil—The marketing of tobacco—The book trade—The meat packing industry—The glass trade—The marketing of chemicals—The iron and steel trades—Hardware—Subsidiary selling companies—The attitude of wholesalers to manufacturers who sell direct	80

CHAPTER IX.

CONCLUSION	96
INDEX	105

American Business Enterprise

CHAPTER I.

INTRODUCTORY REMARKS.

THE subject of this Report is described on the title page as “ American Business Enterprise.” It may be said to fall into two fairly well-defined parts—the first being largely descriptive, the second analytical.

In the first part an account is given of some of the causes of the success of American industrial and commercial undertakings, especial stress being laid on the comparative equality of opportunities and the absence of class distinctions which exist in the United States, and on the importance attached to higher commercial education. A short reference is also made to the large part played in the modern economic world by advertising, and attention is drawn to some of the principal financial aspects of business enterprises. The manner in which the various subjects are treated is so general, that no attempt has been made to divide it up into sections, and the whole of Part I. consists of a single chapter.

In Part II. an examination is made of the structure of modern industrial and commercial undertakings. Very few businesses to-day can be regarded as single enterprises; they are really aggregations of like, or unlike, units. In the former case reduplication, and in the latter complex organisation, is the result. Assuming for instance, that £25,000 are necessary for establishing a spinning mill on a remunerative basis, £30,000 for a weaving shed, £30,000 for a bleaching, dyeing, printing and finishing plant, and that a capital of £15,000 is

required in order to finance a cloth-selling department, then a capitalist with £100,000 might either employ all his money in spinning alone, which would enable him to produce on a scale four times larger than that necessary for remunerative production, or he might employ his capital in a remunerative manner by spinning, weaving, bleaching, dyeing, printing and finishing goods, and by undertaking their sale on his own account. On the assumptions made, both these methods of employing his capital would pay him, but this is something entirely different from saying which method would pay him best. There are probably several ways in which a manufacturer can employ capital profitably. The great problem for the large business man is to decide in what direction he can best extend his activities. He may reduplicate his plant, or he may undertake some new kind of work. Very likely the new work will be incidental to the old undertaking: it may be an earlier, or a later, stage, in the course of the production of the commodity manufactured, or it may be subsidiary to the principal enterprise. On the other hand, the new departure may be in no way related to the old undertaking, and the work may be merely similar, or the new product may be such that it can easily be marketed with the old.

A favourite method of extending an industrial undertaking at the present time is by the addition of a commercial department; in other words, the producer ceases to be purely a manufacturer, and engages in the marketing of his products. All manufacturers are obliged to dispose of their products, but frequently they content themselves with selling their output in bulk to large dealers, which involves comparatively little expense and trouble, and practically no capital. Occasionally, however, they wish to come into closer touch with the consumer and to do away with some of those persons who stand between them; in such cases they may be said to market their own products, or to sell direct.

In Part II. the various points raised above in connection with industrial organisation are considered at some length; the scale of production; integration and subsidiary work; the establishment of retail stores and the control of retail prices by manufacturers; as well as the manufacture and the marketing of related products. Towards the end there is a short discussion of the effect on middlemen, caused by the direct selling of manufacturers.

PART I.

CHAPTER II.

BUSINESS ENTERPRISE.

American attitude towards business—Class distinctions in the United States—Students working their way through college—University graduates in industry and commerce—Commercial courses for business men—Labour saving devices in commerce—The place of advertising in business enterprise—The importance of incorporated companies—Differences between English and American companies—Reasons for the extension of joint stock management—Influence of company organisation on efficiency of management—The basis of capitalisation of corporations—The underwriting syndicate—Short time notes—Convertible bonds—Influence of corporate management on employees—Large partnership concerns—Concluding remarks.

Some Causes of Commercial and Industrial Progress.

To understand fully the great growth in the scale of American industrial undertakings and in the complexity of their organisation, it is necessary to have some insight into the American attitude towards business. In England many of the most able and best educated young men enter politics, the Home or Indian Civil Service, the Church, the Army or the Navy. In the States, the men with the very best brains go into business, which is regarded as practically the only suitable opening for talent. Sometimes they become lawyers, but an American lawyer is essentially a business man. In a word, to an American, business is the ideal career. He frequently regards it as work and play at the same time; it is both

his occupation and his hobby. His office hours are usually no longer than those of an Englishman in a similar position, though very probably the American is at work earlier in the morning. But on reaching home in the evening he still thinks of business, and very possibly talks about it to his wife and children. He seldom takes a holiday, and hardly ever retires from business. On the one hand, the American business man is never satisfied that he has earned enough money; and on the other, there is no place in the American scheme of life for the *rentier*; besides, as he seldom has interests outside his business, he would not know how to occupy himself if he retired. He generally dies in harness, not infrequently at a comparatively early age, and a martyr to some form of nervous disease, the result of the strenuous life he has led.

The object of the foregoing remarks is to help to explain the energy and boundless ambition of the American business man. If an Englishman owns a business which provides him with a comfortable living, he will probably make little attempt to expand it, as any extension will be followed by increased responsibility and worry, and these he wishes to avoid. Not so an American; his love of business, his love of money, his love of mere bigness, all urge him to take every opportunity of increasing the size of his undertaking. When one remembers, in addition, that to a large extent, success in commerce or industry implies social distinction to a far higher degree in America than in England, a good deal of light is thrown on the difference between the English and the American attitude towards business. Mobility of labour, comparative freedom from class distinctions, absence of the barriers which prevent people from moving upwards in the scale of society, are other factors which have an important bearing upon business enterprise in the United States. It would be a mistake to say there are no class

distinctions in America; that there are no social barriers other than the absence of wealth. Intellect and good breeding count for a great deal in the more exclusive circles of the large cities of the East, but the members of such circles are hardly numerous enough to be regarded as constituting a class by themselves. In the United States no one need consider any position as absolutely beyond his reach; the fact that he is born in one sphere of life, is not a reason for remaining in that sphere, as is so frequently the case in the old countries of Europe.

At any given time there are classes from which particular kinds of labour are obtained, but these are continually changing and moving upwards. At one time the labourers who did the unskilled work in connection with the railroads and the streets were Irish; later their place was taken by Germans and Scandinavians, and now the work is done by Italians. It is almost impossible to induce an American-born white citizen to enter into domestic service, chiefly because of the social inferiority thereby implied. Such places, when not held by coloured people, are almost always filled from the latest tide of European immigrants, at present by Hungarians. The native American regards some kinds of factory work very much in the same way; English-speaking girls prefer to work as stenographers, clerks, etc., also in times of prosperity many parents do not wish their daughters to go out to work, and in any case not to mills. The operatives in the Fall River and New Bedford cotton mills are largely French Canadians and Portuguese. Scarcity of labour is forcing Newark textile manufacturers to employ operatives of South European origin, which they do very unwillingly, as these people have little aptitude for this class of work, and are frequently injured. In a hat factory some of the work is very unpleasant and even dangerous. Thus in preparing the felt, the skins have to be treated with

nitrate of mercury, which affects the health of the workmen. In the blowing department, where the hairs are separated from the fur, the conditions are distinctly disagreeable, and this is still more so in the sizing room, where the floor is flooded with hot water and the atmosphere is full of steam. The work in these departments is performed almost entirely by foreign-born labour.

As explained above, there are class distinctions of a kind in America. The native American looks upon certain kinds of work as beneath him; on the other hand, he feels that the best positions in the land are by no means beyond his reach. Several of the Presidents have been of very humble birth and have filled the office with great dignity. Similarly many railroad and industrial officers have risen from the ranks. In business life in the United States there are no places ear-marked for the sons of the upper classes, whether they possess the necessary capacities or not. In Europe a working man, however great his ability, frequently feels he cannot rise above a certain point, and instead of being fired by ambition and saving every possible penny for his own and his children's education, as an American would do, he works merely to retain the position he is in. Every American-born man feels he is equal to any other, and seeks, by educating himself and his children, to rise in the social scale, and if he does rise, his origin does not deter people from associating with him.

One of the most interesting aspects of the effort towards self-education is that class of university students who work their way through college, not by means of scholarships, but by manual and clerical labour performed during term time and in the vacations. This class of student is particularly common at Brown University, Providence, R.I., where many of the men earn free board and lodging, and occasionally money, by doing work of a domestic character, whilst pursuing

their studies. Thus in the house where I stayed, one student waited at table (in ordinary clothes) and another washed up the dishes. It often happens that students wait on fellow students and on members of the University staff, yet nobody thinks any the worse of them for that, which shows that the spirit of democracy and equality is well spread out in the States. Frequently men, who have left school early, save all the money they can in order to enter a University at the first opportunity. The desire for higher education is certainly very great, and it is not only inspired by a general longing to rise in the scale of society, but also by the knowledge that it will be of direct pecuniary advantage in the long run.

Of recent years there has been in the United States a very considerable demand among members of the commercial community for university men. This applies particularly to men with a technical training, but it is expected of them that they shall be more than mere chemists, engineers, etc. Their education is to fit them for dealing with men and managing businesses. With a view to this end they study economics, generally of a very practical kind: the methods and policies of the large trusts, the organisation of labour and its relation to industrial management, the modern problems of industrial finance such as the advantages and disadvantages of issues of common or preferred stocks or bonds (*i.e.*, debentures), the reasons for making improvements out of capital, or out of profits, a description of the negotiations for underwriting a new issue of stock or bonds, etc. At the Massachusetts Institute of Technology every student has to take at least one course in economics, and many take more. At Harvard the Economics Department is the second largest department in the University, and its courses are followed by more than fifteen hundred students; and this is typical of what is happening at most of the institutions for higher education all over the country.

The demand among business men for university graduates is not limited to those with a technical training. Frequently those who have followed a purely academic (*i.e.*, Arts) course are preferred, the firm giving the men whatever special training they may require. Railroads, insurance companies, brokers and banking houses are among those who are anxious to employ college men. Along some lines the demands are so great that the universities cannot supply sufficient graduates. Thus the New York banking houses are anxious to obtain men with a good economic and statistical training to work in their investigation departments, which make very careful inquiries before the firms enter upon any scheme for underwriting the new stock and bond issue of any railroad or industrial concern.

In autumn, 1906, a new directory of living graduates and former students of Princetown University was published. From this book figures have been compiled which show that the American college graduate of to-day is more and more choosing a business, rather than a professional, career. Exclusive of those graduating in 1906, there were a year ago 7,190 living alumni of Princetown. Of the 6,522 classified according to their occupation, 2,285 are in business, 1,498 in the law, 924 in the ministry, 699 practising medicine, 433 teachers, 290 engineers, 104 journalists, 50 ranching and farming, 50 gentlemen of leisure, 41 students, 34 in the army, 31 in the civil service, 26 architects, 19 chemists, 10 artists, 9 authors, 7 in the navy, 5 librarians 4 musicians and 4 dentists. When one remembers that the courses offered by Princetown are of an essentially academic and non-technical character, some of the above quoted figures are truly remarkable. On the one hand, a third of the graduates are in business and nearly a quarter engaged in law; on the other hand, the number of gentlemen of leisure and civil servants educated at Princetown is practically a negligible quantity, and the same thing is

no doubt true of the other leading American Universities.

There are very many young Americans in business who have not enjoyed the advantage of a university education, but who have attended evening classes in various subjects. These courses are generally of a very practical kind as contrasted with those offered by English Universities. As an example a description may be given of a few of the evening lectures held in the New York University School of Commerce, Accounts and Finance. In the class in Business Organisation and Statistics, a study is made under the guidance of a trained accountant of the internal management of a large business: the differentiation of the duties of the various departments, the advantages of various methods of organisation as regards economy and the preservation of goodwill, trade marks, local interests, etc. The course treats of the organisation of corporations controlling different branches of industry, the relation of one branch to the others, and the relation of each to the parent company. In view of the complex character of modern commercial and industrial undertakings in America, a course of study along the lines indicated can be of great advantage to young men who are aspiring to managerial positions.

It does not require a very long stay in the United States to become convinced of the very important part played by advertising in modern business systems, and this is recognised by the university organising a class in this subject. The channels of trade and the circulation of newspapers and magazines are discussed; the literature and typography of advertising are treated, and the mechanical and accounting details explained. Particular attention is given to financial and transportation advertising.

A course especially designed to be helpful to men going into insurance companies and into banking and stock and bond houses, is that dealing with investment and speculation. It aims at qualifying the student

for that critical analysis of a security, which is necessary to a sound estimate of its value. It treats of topics like the following : the source of funds seeking investment ; the nature and value of securities issued by the Governments of the leading countries of the world ; municipal bonds and the conditions determining their legality ; the various classes of securities issued by street railways ; why the bonds of industrial corporations are not popular ; railroad stocks and bonds. The advantages of different classes of bonds for the investor, as well as for the corporation, are likewise considered. The course also treats of the nature of speculation and describes the process by which it is carried on in stock and produce markets. In the class on Corporation (*i.e.*, Company) Finance a practical study is made of the financial organisation and conduct of large corporations, especially railroad and industrial combinations ; in that on Re-organisations and Analyses of Reports, the annual reports over a series of years of each of several railroad and industrial companies are analysed and compared with a view to showing students how to verify their income statements and to form a judgment as to the efficiency of their management. A study is made of several companies during insolvency and re-organisation, showing what problems arise, how they are solved, and as far as possible, from a study of conditions existing during and before insolvency, how the particular solutions were arrived at.

Quite recently a course in practical salesmanship has been instituted at the New York University. The official announcement says : ‘ Its one aim is to give the student greater money-making, business-building and result-producing ability.’ It deals *inter alia* with the personality of the salesman, his health, dress, expression, fluency of speech, tact and enthusiasm, the study of the customer, how to attract, interest, convince and persuade, how to frame selling arguments and to present them in

the most effective order; it treats of sales by letters, catalogues and advertisements; of the laws governing sales; of selling organisations, and of selling methods and systems.

One other subject to which a great deal of importance is attached in American evening schools is accounting. At the New York University more than a dozen courses are offered in this subject alone. Thus there are classes in accounting practice, accounting procedure, theory and practice of cost accounts, philosophy of accounts, auditing, accounting of executors and trustees, investment accounts, and railroad accounts and statistics.

Some Manifestations of Business Enterprise.

Without dwelling any further on the importance of higher education, combined with personal ambition and absence of class distinctions, in causing the extension of business enterprise in the United States, I now wish to turn to another aspect of the question and to consider one or two of the manifestations of American business enterprise quite apart from the fact that similar manifestations are to be found in Europe, though very possibly to a less extent.

In the first place, some mention must be made of the employment of labour-saving devices in commerce. Chief amongst these the telephone should be named. The importance of this electrical invention in the American business world cannot be overestimated. It is to be found in almost every office and in most private houses. Practically every one of the larger establishments has a switch-board of its own, in connection with a private office system of telephones. All the more important men have instruments standing on their desks, from which they can talk with any other part of the office, or with any person who can be reached over the local, or long-distance systems. In some towns they are competitive telephone companies, and it is often

necessary for business men to have two sets of instruments. In the small room of the vice-president of an important New York bank, there were ten telephones standing on two double and one single desk. The representative in New York of a large European bank has his office on the nineteenth floor of a Broadway building, and does practically all his business over the telephone. A Boston firm of engineers, whose offices occupy three floors of a fairly large building, utilise some ninety desk telephones. These are merely examples of the use to which this instrument is being put all over America. Its extensive employment is not due to cheapness, for, on the contrary, the system is largely a monopoly and distinctly expensive; it is to be attributed to the general recognition of its value as a labour-saving device.

Other electrical appliances, which are frequently found in offices are tape machines and similar arrangements for the immediate distribution of business and other news; also a lever, or button, by which it is possible to call a messenger boy from one of the large telegraph companies.

Another aspect of office labour-saving methods is afforded by the extensive use of filing systems and card catalogues for indexing, account keeping and other purposes. The great object is to save time in obtaining information, finding documents, etc. It is partly for the same reason that the heads of a business frequently have their desks near together in the general office, so as to be more accessible to each other and to the employees of the firm. It also enables them to have a better control over their staff. Another feature of the general effort to save time and labour is the almost universal use made of stenographers by men holding the better positions in commerce and industry. Everything that it is necessary for these men to write is taken down in shorthand from their dictation, and is afterwards type-written, and brought to them for signature. This is only another

example of the general idea so prevalent in America, that every man should employ as great a part of his time as possible in performing the highest type of work of which he is capable, or, in other words, that minute division of labour is as economical in commerce as in industry.

Whenever the economies of industrial combinations are discussed, emphasis is laid on the saving thereby effected in the cost of advertising. Thus in the recent soap trust libel action, it was mentioned that Lever Brothers had spent £2,000,000 in advertising since their foundation some twenty years previously. There can be no doubt that in America enormous sums are spent on advertisements, and that from the point of view of society the money thus spent is practically wasted, because the community as a whole can hardly be said to benefit by it, but from the point of view of an individual, who has an article to sell, it is frequently essential to incur such an outlay. The problems connected with advertising are far from simple, and to make a success of it very expert knowledge is often required. With the great growth in the production of goods bearing a trade-mark, or made up in distinctive packages, the manufacturer is devoting more and more attention to advertising. He no longer leaves it to the retailer to draw the attention of the public to his goods, but does so himself by some scheme of advertising, the scope of which depends on the size and nature of his market. If he has a mechanical device which he wishes to sell to millowners, he will probably insert notices in technical papers. If, on the other hand, he wishes to reach the general public throughout the country, such national organs as the monthly magazines will very likely answer his purpose to some extent. The great size of the United States renders the circulation of all daily papers little more than local, so that by means of them it is possible to reach the public of a particular district only. Consequently they are chiefly used for advertising of a local character. The same is to a considerable

extent true of the placards displayed in the tramcars of small towns, whilst those in the cars of large cities frequently partake of a much more national character. In passing, it may be mentioned that these placards, generally some nine by eighteen inches in size, are often very artistic, the design and colouring being well conceived and the printing well executed. Another fairly favourite form of advertising well-known products, quite apart from local schemes, is by means of large signboards along the routes of the main railroad lines. The notices on these, as well as on the signboards in the cities, are generally hand-painted, and not pasted on as in England.

In addition to the makers of proprietary articles there is one other class of people who spend especially large sums on advertising, namely, the owners of department stores.* They generally insert daily announcements in the local papers, drawing attention to a few special lines of goods being offered in different departments. Care is taken to choose papers circulating among the class of people who are likely to buy the particular articles advertised, and the choice of articles depends a good deal on the weather. The American department stores are generally exceedingly pushing. They frequently offer a few good bargains, which are well advertised in order to attract people into the store, for it is part of their general policy to encourage the public to pay a visit, quite apart from making purchases. With this object in view, they do all they can to make the store attractive. Refreshment, resting and writing rooms are provided; sometimes there is music, and at other times special displays of goods. They do not appear to follow the English idea of having a general sale once or twice a year. They prefer to have a kind of permanent sale, first in one department and then in another. The

* See page 45.

cheaper class of stores frequently offer trading stamps,* as also do other shops, or they establish some system of bonuses, premiums or prizes. Sometimes it is the manufacturers who do this, sometimes the storekeepers. Smokers could at one time collect both the tags attached to the packets of the goods of the American Tobacco Company and the coupons given by the United Cigar Stores Company, but now this duplication is being done away with.

Advertising is a very large subject in itself, of which no adequate idea can be given in a couple of paragraphs. It is only mentioned on account of its great importance in every modern scheme of business enterprise. Great skill and ingenuity are generally required to lay out money to the best advantage in advertising, and Americans frequently excel at devising new schemes and at organising campaigns. Some readers may remember that the sale of the tenth edition of the Encyclopedia Britannica, which caused so much stir in England a few years ago, was managed by an American. At the present time in the United States there is no absence of special efforts to push business by cleverly arranged systems of advertising, but it is outside the scope of this chapter to touch on advertising other than in a general way.

Industrial Finance.

If we turn to the financial aspect of business enterprise in America, the most striking feature is the importance in the industrial world of the incorporated company, or corporation, as it is generally called. This fact is well brought out by the figures given on page 20, which

* Trading stamps are bought by shopkeepers in large quantities from Companies which issue them, and are given to customers, in proportion to the value of purchases made. When customers have collected sufficient stamps, they return them to the issuing Company and receive presents in exchange.

are taken from the last United States Census* of Manufactures. Though roughly only one-quarter of the manufacturing establishments of the United States are organised on a corporate basis, the value of their product is about three-quarters of that produced by all the manufacturing establishments taken together. Owing to some alteration in the definition of manufacturing establishment, it is impossible to give comparative figures for 1900, but there is little doubt that the importance of the incorporated company is on the increase.

CHARACTER OF OWNERSHIP OF MANUFACTURING ESTABLISHMENTS IN THE UNITED STATES IN 1905.

	Individual.	Firm.	Incorporated Company.	Miscellaneous.‡	Total.
Establishments:—					
Number	114,000	48,000	51,000	3,000	216,000
Per cent	52·7	22·2	23·6	1·5	100
Capital:—					
Amount	\$966,000,000	1,189,000,000	10,510,000,000	21,000,000	12,686,000,000
Per cent	7·6	9·4	82·8	0·2	100
Wage-earners and wages:—					
Average					
number	756,000	841,000	3,864,000	9,000	5,470,000
Per cent	13·8	15·4	70·6	0·2	100
Wages	\$347,000,000	380,000,000	1,879,000,000	5,000,000	2,611,000,000
Per cent	13·3	14·5	72·0	0·2	100
Miscellaneous Expenses:—					
Amount	\$147,000,000	199,000,000	1,106,000,000	3,000,000	1,455,000,000
Per cent	10·1	13·7	76·0	0·2	100
Cost of Materials used:—					
Amount	\$879,000,000	1,202,000,000	6,382,000,000	41,000,000	8,504,000,000
Per cent	10·3	14·1	75·1	0·5	100
Value of Products:—					
Amount	\$1,703,000,000	2,133,000,000	10,912,000,000	54,000,000	14,802,000,000
Per cent	11·5	14·4	73·7	0·4	100

* Census Bulletin 57, Washington 1906, p. 14.   ‡ Including Co-operative Associations,

In a general way the American corporation is similar to the English limited company, but it is impossible to say anything very definite, as every State in the Union is entitled to pass corporation laws, and according to the Federal Constitution, a company incorporated in one State is authorised to carry on business in every other State. Consequently there is a whole series of corporation laws in the United States, some, such as those of New York State and Massachusetts, fairly strict, and others, such as those of Maine, Delaware and New Jersey, distinctly complacent. When promoters wish to incorporate a company they naturally choose a State where the law is lax; but there are other points which they have to consider. The fees must not be too high, it is desirable that the interpretation of the law should be quite clear, which is most likely to be the case if all doubtful points have been decided by the courts, as has largely happened in New Jersey; also corporations are generally obliged to hold their annual meetings in the State of registration, and as New York is the business and financial centre of many of the largest undertakings, the officers and directors find it convenient to register in New Jersey, which is just across the Hudson River from New York City. Thus several causes combine to make New Jersey a favourite State for the purpose of registering corporations, and most of the so-called trusts come under the laws of that State.

Although nothing very definite can be said about the differences between an English company and an American corporation, apart from the fact that the laws governing the former are much stricter than those governing the latter, I should like to draw the reader's attention to one point before considering some of the causes which have led to the great growth of the corporate form of business enterprise in America. In England, the practical management of a company rests with the board of directors, although there are many things which they

are obliged to submit to the shareholders for approval, including the declaration of an annual dividend. Frequently the directors delegate some of their authority to a general manager or secretary, but these officers are distinctly under the control of the board of directors. In America, the entire management of a corporation rests with the executive officers, the president, vice-presidents, secretary and treasurer; generally it is the president who takes the leading part in the management of the concern, but in the case of textile companies the treasurer is usually the most prominent officer. The executive officers do more or less what they like, declare dividends and tell the shareholders just as much, or as little, as they choose. In the case of some large concerns, such as the Sugar Trust and the Standard Oil Company, very little information regarding financial conditions is given, and no statements of earnings are issued to the shareholders. In America the executive officers of a corporation appear to have more power than the directors of a company in England, but it must be remembered that whilst the latter have generally a very small sum invested in their company, and consequently have little at stake, the former frequently have a very large, if not a controlling, interest in the concern they manage, with the result that they are more likely to bear in mind how much depends on the efficiency of their management.

In this connection mention may be made of an objection which is sometimes raised in England to company management, viz., the possible disclosure of business secrets. Under certain circumstances this may be a reasonable ground in the United Kingdom for a firm to retain a partnership or individual organisation, but in the United States, where a company is not compelled to make any annual returns with regard to its financial position, and where the executive officers and directors can tell the shareholders and the public whatever they think fit, this fear of divulging secrets is not an

obstacle which would prevent the incorporation of a private concern.

The position of the directors in American corporations is largely nominal. On this point it is interesting to note the remarks of a large New York banker* :—

“ The system of directorship in the great corporations of the City of New York is such that a director has practically no power ; he is considered in many instances, and I may say in most instances, as a negligible quantity by the executive officers of the society ; he is asked for advice when it suits the executive officers, and if under the prevailing system an executive officer wishes to do wrong, or wishes to conceal anything from his directors, or commits irregularities, the director is entirely powerless ; he is only used in an advisory capacity, and can only judge of such things as are submitted to him. Directors are of very little use except to comply with the formal provisions of the law.”

The reasons for the extension of the joint-stock or corporate form of management are numerous. At the outset it may be noted that usually it is individual enterprises or partnership concerns which are converted into corporations, and not new concerns which are started as companies. In a general way the corporate organisation of businesses permits of far greater aggregations of capital than is the case with private firms and partnerships, and this alone is sufficient to explain the incorporation of such undertakings as railroads, street railways, canals, etc. In many cases the possibility of limiting the liability of participating capitalists induces firms to incorporate. This applies especially to banking and insurance concerns, and to many kinds of speculative undertakings. In England, where firms doing a financial

* Evidence of Mr. Jacob H. Schiff, senior member of Kuhn, Loeb & Co., New York City, before the State of New York Legislative Insurance Investigating Committee, 1905. Report p. 1,000.

business are limited companies, there is generally a large amount of uncalled capital which acts as a kind of guarantee to creditors that all money owing to them will be paid. Thus bank and insurance shares in the United Kingdom are almost always only partly paid up, but this is not the case in America, where such shares are regarded unfavourably. Nevertheless somewhat similar conditions exist in the case of the national banks in the United States, for, in case of winding up, shareholders in these institutions are liable for an amount not exceeding the face value of the stock they hold.

It is not only the large concerns which appreciate the advantages of limited liability. Many small partnerships incorporate likewise, because they are thereby able to escape the danger of dissolution due to the death or retirement of one of the partners, and because a corporation is more stable than a partnership owing to the interests of the different members being more easily re-adjusted in the former than in the latter.

Another advantage which a company enjoys over a private concern is the possibility of distributing its shares in such a way as to influence local opinion, or even public opinion in general. Thus, for example, the stock of the United States Steel Corporation is far more widely held than that of the Standard Oil Company, and this has doubtless something to do with the fact that far fewer complaints are to be heard about the management of the former than about that of the latter corporation. Where the securities of a gas company or street railway are held locally, especially by banks and savings banks, a very strong influence may be exerted on local sentiment, and the undertaking may escape public criticism in this way. Something similar has very possibly happened in England in the case of breweries. In America it is generally the so-called public service corporations which by a careful local distribution of stock wish to escape criticism with regard to mismanagement, but occasionally

private concerns, which are frequently involved in labour disputes, hope to reduce the hostility of the public, if not to obtain its sympathy, by becoming corporations, thus seeking to identify the interests of the public with those of the shareholders.

At the present time in America it is a very common thing for one man to be associated with several concerns. On the one hand, he wishes to spread his investments so as to reduce the chance of loss; and on the other, he may find it desirable to be interested in several undertakings, as in this way a community of interests may be established which is likely to be profitable to all concerned. For one man to be connected with several businesses, it is essential that they should be corporations with limited liability, as otherwise the failure of one firm would place all the others in difficulties, or might even ruin them. It is very probable that the tendency for men to become interested in several concerns is an effect more frequently than a cause of the formation of companies. In those cases, however, where an old establishment is extending its sphere of activity by means of a new branch or department, it is very likely that the different parts will be organised as separate corporations, so as to keep the identity of each of the two business entirely apart, in any case as long as the newly-developed part is in an experimental stage. Later the two companies may amalgamate, though this is not always the case. Frequently large American corporations find it very convenient to carry on a large part of their business by means of subsidiary companies. These may have a very small capital, and consequently offer little temptation to the taxation authorities. Again, if a large corporation wishes to do any business, the legality of which is very doubtful, it generally arranges that the actual breaches of the law shall be committed by a small company with few assets, so that when a heavy fine is imposed, or an aggrieved party is awarded large damages, there are no

funds from which compensation can be paid. The old subsidiary company is wound up and a new one started instead, and the large corporation is practically as well off as it was before. As examples, two kinds of cases may be mentioned. It is generally the subsidiary companies of large trusts which fix prices and limit output in a way that is contrary to the Federal, or State, anti-trust laws, and if their acts are declared illegal and they are fined, they are simply wound up and their place is taken by a new subsidiary company. In the automobile industry there are many patents the validity of which is doubtful; whilst actions are pending in the courts, various small companies employ these patents, knowing that they will be liable to heavy damages if the patents are held to be valid. This contingency, however, does not disturb them very much, as they keep their assets at the lowest possible point, and should damages be obtained against them, they will immediately go into liquidation. In the meanwhile they are reaping handsome profits.

One of the most important questions which arise in connection with the growing tendency for businesses to be organised on a corporate basis, is the influence on the efficiency of the management of such businesses. No one expects an English joint-stock company to display great rapidity of action, or to show very much initiative, as practically nothing can be done without reference to the directors, and possibly to the shareholders, and the greater the size of the directorate, the greater the delay is likely to be, as it is well known that large committees do not act quickly. In this connection the distinction drawn between the English directors and the American executive officers of a company is of importance. Generally speaking, the president of an American corporation acts just as freely and energetically on behalf of his company as he would on his own behalf. If he actually controls the corporation, of which he is president,

he will probably act entirely on his own responsibility; if not, he may consult the other executive officers and even one or two of the largest stockholders. But in any case all necessary changes will be made with the smallest possible delay. There are so-called one-man companies in the United Kingdom, but, generally speaking, they are looked upon with a certain amount of suspicion. This is not at all the case in America, where it is quite customary for one man, or a small group of men, to "control" a corporation, or, in other words, to own a majority of the stock. Whenever this happens, the minority stockholders have practically nothing to say in the management of the undertaking, and they appear quite contented that this should be so, as they feel that the conduct of the business cannot be in better hands than in those of the men who have the greatest amount at stake in its success.

In considering the subject of the control of large corporations by a single man, or at most by a small group of men, and of the attitude of the general shareholders towards the somewhat arbitrary management of such concerns by the executive officers, it is necessary to bear in mind the nature of the capitalisation of such corporations, and the distribution of their securities. Very frequently in America the only securities of a large corporation which are originally offered to the public, are the bonds (*i.e.*, debentures) and the preferred stock. These frequently represent the tangible and the intangible assets respectively of the undertaking, or, in other words, the bonds stand for the material properties and goods owned by the concern, and the preferred stock for goodwill, patents, etc. The common stock is water pure and simple, which is used for the payment of commissions. It also comes in very useful for the purpose of assisting some important stockholder to secure control of the corporation, as large quantities of it can be obtained cheaply, if not for nothing. With regard to

the general security-holding public the following points may be noted:—As long as the bondholders receive their interest regularly, they have no right to interfere with the management of the concern. The preferred stockholders are entitled to vote at the general meetings, but whilst they receive their full dividend, they take little interest in the undertaking. In any case the stockholders are likely to be very much scattered throughout the country, which renders any concerted action on their part almost impossible. The people who are most interested in the success of the concern are the owners of the common stock, which is generally held in a few hands, closely associated with the active management of the undertaking.

Above, some reference has been made to the subject of stock watering in large corporations. In this connection a clear distinction can be drawn between the United Kingdom and the United States. Plenty of examples of over-capitalisation have occurred on both sides of the Atlantic, and it is to the methods pursued and to the consequences thereof, that attention may be drawn. In England the plant is over-valued, an excessive sum is allowed for goodwill, etc., and the undertaking is capitalised accordingly. The ordinary shares, which correspond to the American common stock, are sold to the public at par, as well as the preferred shares and debentures. The men who originally owned the concern retain a comparatively small interest in it; they have been handsomely paid for their share in it, and they are indifferent as to what happens to it in the future. No one man, or group of men acting in unison, controls the company, and it is left to its fate, which probably means debenture interest paid with difficulty, occasional default in the payment of preferred dividends and no ordinary dividends at all. The general public who bought ordinary shares at par, on the strength of the dividends promised in the prospectus, have practically been

swindled by the promoters. In America they do things a little differently; they openly admit the common stock is water, and accordingly give it away, chiefly to the promoters and underwriters as a reward for their services in organising the corporation. It then becomes the interest of these men to manage the company in such a way that the common stock shall come to have a value, and their profits depend upon their success in doing so. In America, if a company has been over-capitalised, the first and often the only people to lose are the promoters and underwriters; in England the loss falls on those members of the general public who bought the ordinary shares at par. Thus it would appear that when watering of stocks occur, it is a much greater evil in this country than on the other side of the Atlantic; but it must not be thought that the American system is free from abuses. It is subject to one in particular, namely, if the common stock is to become a readily saleable security, dividends must be paid on it, and there is a danger that money, which should be used to meet depreciation and for building up a proper reserve fund, will be distributed as dividends, in order prematurely to enhance the value of the common stock, with a view to giving its holders a favourable opportunity of selling out with the least possible delay. This applies especially to the underwriters who wish to free their money and to realise their profits at the earliest opportunity.

A very important institution in America in connection with the financing of industrial and commercial undertakings is the underwriting syndicate. It is only since 1900 that an English joint-stock company has been permitted to pay a commission to bankers and others for underwriting an issue of its securities, but even now companies do not appear to avail themselves very frequently of this permission. When an issue is underwritten in England, it is still the company which seeks to sell its securities to the public, and only if it fails to do

so have the underwriters to take them up; in other words, the underwriters content themselves with guaranteeing the sale of debentures and shares. In the United States it is the underwriters, or, more strictly speaking, the manager of the syndicate of underwriters, who arranges for the actual sale of the securities. This is accounted for by the fact that the syndicate have bought the securities in a lump at a specified price, and it becomes their business to sell them to the public for the best figure they can obtain.

The need for the underwriting syndicate is explained in at least two ways. On the one hand, the idea seems to exist that the credit of a company would receive a bad shock should the public refuse to subscribe for securities offered directly to the public by the company; on the other hand, the interests of undertakings issuing securities often demand the immediate use of a large sum of money, to obtain which they are prepared to sell the whole issue "en bloc" at a price considerably below that which could be realised by a gradual sale. Consequently the securities are sold in a lump to a bank or banking houses, who act as middlemen between the company issuing securities and the public.*

When the bond and stock market is unfavourable for the contracting of a long time loan, the large railroads and industrial corporations, who need money, issue short time notes. These are drawn up for certain specific values (say \$500, \$1,000, \$5,000, etc.), and bear interest at a fairly high rate. Sometimes the bills mature already after six months, but often they are issued for two or three years. On a recent occasion the Pennsylvania Railroad borrowed \$50,000,000 in this way, the price being $98\frac{1}{2}$, the time 18 months, the interest $4\frac{1}{2}$ per cent.,

* For the whole subject of underwriting syndicates see pp. 292—294, vol. vii., of the Report of the New York Legislative Insurance Investigating Committee, 1905.

coupons for which were attached. With commission the bankers, who took up the loan, earned about 5 per cent. on their investment. In Spring, 1907, a New York banking house were advertising Southern Railway three year 5 per cent. gold notes at a price to net more than 6 per cent. Before short time notes become due, the company issuing them hopes that financial conditions will have so changed that it can sell its securities in the ordinary way, and thus meet its temporary obligations. The customary manner in which a company secures its short time notes is to deposit collateral, *i.e.*, bonds and stocks which it holds in other companies, with some firm or person acting as trustees.

Another kind of security which is sometimes issued by American corporations is a convertible bond. These are bonds which are convertible into stock at a fixed ratio, either before or at maturity. If the dividend earning capacity of the company is likely to increase, this privilege tends to enhance the value of the bonds, and in any case it adds a speculative element to an otherwise conservative investment. The Pennsylvania Railroad bonds, which were sold in France a couple of years ago, were of this class. In March, 1907, the American Telephone and Telegraph Company issued \$40,000,000 convertible 4 per cent. gold bonds, the condition being that the bonds are convertible at par, at the option of the holder, into common stock at \$140 per share after March 1, 1909, and before March 1, 1918. If additional stock is issued, or sold, at a price averaging less than \$140 per share, bondholders will have the benefit of a reduced conversion price. This is just an example of what is being done to-day by many companies in the United States.

A further point raised by the growth of the corporate form of management is its influence on employees. Occasionally it is stated that a particular private concern was converted into a corporation in order to give its

employees a direct interest in the undertaking, but this appears to be the exception rather than the rule. As a general thing, workpeople feel that a company does not take the same interest in their welfare as a private concern would, and their work is likely to be of a slightly lower quality in consequence. At the same time, it is very possible that the actual conditions under which work is done are better when the undertakings are incorporated than when they are not. This is partly explained by the fact that it is mostly the larger concerns, equipped with all modern appliances, which are incorporated, and partly by the efforts of the officers of large companies to overcome by artificial means the absence of sympathy between employer and employee, which is likely to exist in their case as compared with the more friendly feeling which prevails in a private firm. There are many incorporated enterprises in America which are striving to make conditions of employment as pleasant as possible for their workpeople. There are several forms which their activity may take, such, for example, as surrounding their buildings by pleasant gardens, having well-lighted and airy workrooms, providing comfortable resting accommodation and all possible sanitary conveniences. One of the most remarkable examples which came under my personal observation was that of the Natural Food Products Company at Niagara Falls, N.Y., and another interesting case was that of the Gorham Manufacturing Company, at Elmwood, near Providence, R.I. Two concerns which are generally referred to in this connection are the National Cash Register Company, of Dayton, Ohio, and the Sears, Roebuck Company, of Chicago, Ill. Unfortunately, I was unable to visit these two establishments, and had to content myself with studying the written and printed material they kindly sent me.

Whilst nearly all the large business enterprises of America are organised on a corporate basis, it is

interesting to be able to quote the case of at least one very large and rapidly expanding industrial undertaking which is organised as a partnership. This firm is Burnham, Williams and Co., the proprietors of the Baldwin Locomotive Works at Philadelphia. The business is continually being extended out of accumulated profits, and at the present time employs some 20,000 men. The members of the firm claim that the private form of management is more favourable to their growth than the corporate form would be. The difficulty about the dissolution of partnership at the death of a partner is overcome by a contract into which every partner enters, whereby his heirs must sell his share to the remaining partners at the current book value. Another very large Philadelphia firm which is organised as a private partnership is John and James Dobson, who manufacture carpets and other textile products.

In concluding these introductory remarks, which, under the heading of Business Enterprise, have ranged over a somewhat wide field, I should like to emphasise one point which was mentioned early in the chapter. One of the most important reasons for the success of America in the industrial and business world is the equality of opportunity enjoyed by the inhabitants of that country. A very considerable force working towards this end is the American educational system. In the North, which is the industrial centre of the country, no degradation is attached to sending boys to the Common Schools* (*i.e.*, Public Elementary Schools), and thus

* This is not so true of the South and of the old slave holding aristocracy. By the above statement I do not wish to imply that all rich northerners do send their sons to the Common Schools (many preferring boarding schools for their boys), but in any case there is no prejudice against a boy in the States, merely because he has been educated at a Common School. There is nothing in an American newspaper which corresponds to the statement made in English papers about "Board School successes at Oxford or Cambridge."

rich men's sons and poor men's sons learn to meet and to associate with each other as equals from early boyhood, and this feeling seems to endure throughout life. It is certainly very noticeable in the Universities, none of which can, in any way, be looked upon as exclusive and aristocratic institutions, as compared with Oxford and Cambridge. Both Harvard and Yale are distinctly democratic. The same thing can be noticed in commerce, where a far greater feeling of equality and good fellowship exist between employer and employee than is the case in England. As one American business man remarked to me, this democratic spirit has more than its sentimental aspect; it can be figured out in dollars and cents, as it causes the employees to work better.

It would be absurd to argue that the sole explanation of the success of American business enterprise lies in equality of opportunity and absence of class distinctions, but it cannot be denied that these are most important factors, and it would probably be well if would-be reformers in the old countries of Europe paid more attention to these points.

PART II.

CHAPTER III.

THE ESTABLISHMENT AND THE SCALE
OF INDUSTRIAL CONCERNS.

Units of efficient production—Some economies of large scale production—The size of industrial concerns—The undertaking of various functions by manufacturers—The development of retail marketing—Two classes of articles of domestic consumption—Multiple stores—Department stores—Specialisation and its limitations.

WHILST in almost every industry there are to be found large and small concerns, the important point to determine is the unit of productive efficiency for the different industries. It is also necessary to note whether a producer is able to restrict his activities entirely to the manufacture of an article, or whether the undertaking of other functions is essential to the success of the primary function. Thus in the case of the manufacture of some specialities, it seems essential that a producer should undertake commercial functions in addition to those of manufacturing, as in no other way can he hope to sell his product. In this case the unit of efficient production is likely to be comparatively large and complex. It is frequently difficult to determine the real size of a manufacturing undertaking, as it may be organised, for financial or other reasons, as two or more separate concerns. Consequently it is possible to discuss the subject of the scale of industrial undertakings in a somewhat general manner only.

It is not my object here to seek to demonstrate that

it is cheaper to manufacture on a large scale than on a small one. In a general way I assume this to be true. There are, however, two points to which I wish to draw attention. In the first place, the economies to be derived from carrying on any particular process of manufacture on an increasingly large scale, practically cease at a certain point, at which, what may be described as a unit of efficient production, has been reached. Beyond this point reduplication occurs. Further, it may be noted that the size of units of efficient production vary in different industries. In the second place, large concerns appear to consist of several like or unlike units of efficient production, and it is especially with large undertakings which carry on several functions that this report deals.

When the scale of production in any industry is increased, the producer looks for certain economies in manufacturing, quite apart from the purchase of supplies at cheaper rates, the greater utilisation of by-products, etc. There appear to be three directions in which the producer can hope to economise; he may employ more specialised machinery; he may introduce greater division of labour; and he may reduce the cost of fixed charges in proportion to the total value of the product. As this report deals with practical conditions, the smallest concern which comes into consideration is one which is equipped with sufficient machinery power and specialised labour to be managed on a paying basis. In many cases smallish concerns depend entirely on a local market. This is particularly true of subsidiary industries. As long as the owners of many little plants are content to do a small and limited business, they can earn a living, but as soon as they seek to enter the general market they are hopelessly undersold. This is not necessarily because their actual cost of manufacturing is higher than that of a large producer, though it very probably will be slightly so, but largely because buying and selling, transportation and subsidiary work cost the big producer far less than

they cost the small one. In some industries local markets can hardly be said to exist, as, for example, in the case of textiles. In spite of this, if there is comparatively little scope for highly specialised machinery and elaborate division of labour, a fairly small factory may be able to pay its way, even though it would be more economical to manufacture on a larger scale. This contention appears to be supported by the many small cotton mills in the Southern States. It should be added, however, that the system of selling through commission houses facilitates the existence of small mills.

On the other hand, in industries in which elaborate and expensive machinery is required, if production is to be conducted economically, there is no place for the small concern. This is particularly true of the iron and steel industries. The minimum capital expenditure for the equipment of blast furnaces is high, but in addition to this a very large outlay can be incurred in providing mechanical facilities for the handling of the heavy raw material and finished products. Some of these mechanical facilities are essential, and others are undoubtedly economical, though it may be possible to establish a plant on a paying basis without them.

The position with regard to highly-skilled labour is somewhat similar. In some cases it is only possible to produce cheaply if the division of labour is very considerable. Thus, in the department of a large meat packing house where the animals are slaughtered, division of labour is carried to a great extreme, each man in turn performing one single operation on the animals, frequently not more than a single cut. A similar policy is followed by the large agricultural implement makers. In the boot and shoe industry there is both highly-specialised machinery and considerable division of labour, but the fact that much of the machinery can be leased from the United Shoe Machinery Company for a rent of so much per pair of shoes made, enables the

small manufacturer to produce under conditions almost as favourable as the large one.

The savings to be effected in fixed charges owing to an increase in the scale of production are by no means negligible, though hardly sufficient by themselves to render production in a well-equipped, though small, factory unremunerative. It is chiefly in the cost of buildings, power and superintendence that the large producer can hope to save, but even these economies appear to cease at a certain point, and frequently a firm will build and equip two or three moderate-sized mills rather than one very large one.

The only figures which can be quoted to illustrate the scale of different industries are those given in the United States Census of Manufactures to demonstrate the tendency towards concentration into large establishments. The table quoted on page 41 gives for sixteen different industries—(a) the average capital per establishment; (b) the number of wage-earners; (c) the amount paid in wages; (d) the value of the product; and in this way it roughly indicates the scale of production in different industries. The figures fail to give a very accurate impression of the size of single undertakings in the various industries, as the small establishments are included with the large ones in making up the averages, and many nominally separate establishments may be controlled by the same people, and should be treated as one for all practical purposes. Although the figures do not indicate well the actual size of the individual establishments, they do show the comparative scale of production in the different industries. Thus in the iron and steel industry the undertakings appear to be larger than any other industry, which confirms the impression one receives from a general observation of actual conditions. Further, the scale of production in the worsted industry is much bigger than is the case with wool, which fact can also be ascertained by personal

TABLE ILLUSTRATING THE SCALE OF PRODUCTION.

Industries.	Year.	Number of Establish- ments.	Capital. \$	Average per Establishment.		Products. \$
				Wage Earners. Average Number.	Wages. \$	
Agricultural implements	1900	715	220,571	65	31,400	141,549
	1890	910	159,686	43	19,898	89,310
	1880	1,943	31,966	20	7,965	35,327
Boots and shoes (factory product)	1900	1,600	63,622	89	36,985	163,143
	1890	2,082	45,765	64	29,139	105,980
	1880	1,959	21,947	57	21,951	84,763
Carpets and Rugs (other than rags)	1900	133	334,205	214	83,619	362,349
	1890	173	220,860	166	64,291	276,128
	1880	195	110,095	104	35,052	163,040
Cotton Goods	1900	1,055	442,882	287	80,170	321,517
	1890	905	391,183	242	72,955	296,112
	1880	1,005	218,412	185	45,387	209,901
Glass	1900	355	173,025	149	76,295	159,267
	1890	294	139,343	153	71,041	139,629
	1880	211	94,051	115	43,337	100,259
Hosiery and knit goods	1900	921	88,882	91	26,448	103,673
	1890	796	63,578	75	20,827	84,474
	1880	359	43,397	80	18,667	81,246
Iron and Steel	1900	668	858,371	333	180,869	1,203,545
	1890	699	591,085	250	136,652	683,124
	1880	699	294,692	197	78,020	418,583
Leather, tanned, curried and finished	1900	1,306	133,214	40	17,298	156,231
	1890	1,787	54,890	24	11,891	96,327
	1880	5,628	13,039	7	2,932	35,584
Liquors, malt	1900	1,509	275,205	26	17,115	157,236
	1890	1,248	186,275	24	16,597	146,420
	1880	2,191	41,629	12	5,567	46,124
Paper and Woodpulp...	1900	763	219,538	65	27,191	166,876
	1890	649	138,412	48	20,346	121,629
	1880	742	64,878	35	12,089	77,314
Shipbuilding	1900	1,116	69,321	42	22,257	66,826
	1890	1,006	27,100	22	13,006	37,838
	1880	2,188	9,589	10	5,811	16,819
Silk and silk goods ...	1900	483	167,872	135	43,441	222,063
	1890	472	108,067	105	37,632	184,954
	1880	382	50,066	82	23,944	107,416
Slaughtering and meat packing	1900	1,134	168,172	61	29,915	696,872
	1890	1,367	86,332	33	18,046	413,070
	1880	872	56,673	31	12,051	348,122
Tobacco, chewing, smok- ing and snuff	1900	437	100,358	67	16,270	237,424
	1890	395	78,079	75	17,588	166,693
	1880	477	36,074	69	13,457	110,677
Woollen goods	1900	1,035	120,180	67	23,920	114,425
	1890	1,311	99,916	59	19,938	101,890
	1880	1,990	48,289	43	12,983	80,707
Worsted goods	1900	186	710,581	306	108,025	646,851
	1890	143	476,120	301	104,510	553,809
	1880	76	268,080	247	74,777	441,447

inquiry. It appears to be largely accounted for by the more elaborate and expensive machinery required for the equipment of worsted mills. Besides there is said to be a greater demand for worsted goods, the marketing of which is consequently facilitated, and this would tend to encourage the growth of worsted undertakings, as compared with woollen mills. Similar conditions may be observed in Yorkshire, where the scale of production in the worsted industry is much larger than in the woollen industry.*

In almost every class of industry there are large and small concerns, and the important point to determine is in what way they differ from each other. Generally large concerns consist of a combination of small undertakings, either similar or dissimilar. Thus a large cotton spinning mill with 100,000 spindles is practically the equivalent of two mills with 50,000 spindles each. In this case the large concern is merely reduplicating the functions of a small concern, and if the latter is conducted on a scale which permits of efficient and profitable production, any small savings the former may effect by increasing the scale of production, will probably be counteracted by loss occasioned through less close personal supervision. On the other hand, a large meat packing factory is not a mere compilation of small meat packing factories. The former itself performs several functions which the latter has to have done for it. Thus the big packer does a great deal of his own preliminary subsidiary work; recovers sufficient by-products to make it worth his while to manufacture them into finished articles, and establishes an elaborate system for the distribution of his products. Frequently when a manufacturer increases the size of his plant, there appears to be a tendency for him to undertake new functions. In this way he hopes the work will be

* See J. H. Clapham, *Industrial Organisation in the Worsted and Woollen Industries of Yorkshire*, *Economic Journal*, December, 1906.

done better, or more cheaply, or both. When his scale of manufacturing is such that an increased performance of one function is not likely to lead to a more than nominal increase of profits, the producer is likely to turn his energies in other directions, and in particular to undertake commercial functions, as it is almost always possible to effect economies along these lines, if the manufacturer produces on a sufficiently large scale. On the one hand, he hopes to reduce the cost of selling, and on the other, to secure a safer hold on the market, which may lead to a quasi-monopoly. This is only practicable when the goods bear a trade mark or are made up in easily distinguishable packages, and are always sold under a particular name. If the manufacturer obtains a fairly secure hold on the market, he may be able to keep up prices, should the cost of production fall, or even raise them, if he cannot increase his profits in any other way. This latter expedient, however, is a somewhat risky proceeding and may lead to a revulsion of public feeling,* such as broke up the English soap trust after it had existed three weeks in the autumn of 1906.

It will not pay a manufacturer to do his own marketing unless he produces on a fairly large scale, as otherwise the cost of selling his product will be too great. But once it does become remunerative to sell direct, the proportionate cost of selling goods becomes less and less the more he sells, and for a time the saving is very considerable, as, up to a certain point, the expenses of the selling department are practically stationary. Consequently for a time the line of expansion of any manufacturer, who has recently established a selling

* In this case public opinion was largely excited by the unjustifiable attacks and wild statements of certain London newspapers, the proprietors of which had afterwards to pay £50,000 damages to one large firm of soap manufacturers, and even more to a second.

department of his own, is fairly clearly fixed; he will reduplicate his plant in order to increase his output and thereby avail himself of the opportunity of rapidly reducing the cost of selling. After a time the saving in this direction will be merely nominal, and the manufacturer will seek a new field for expansion.

When a manufacturer undertakes a new function, it is not necessarily so closely related to the original function as when he engages in the direct sale of an article which he produces, or does his own preparatory work, etc. Sometimes he commences to manufacture an entirely new product, either because the demand for the original product is limited, or in order to secure a steadier market, which will be more and more the case the greater the quantity of articles he manufactures. Occasionally he wishes to utilise to the utmost a valuable name which he may possess. After a name has become associated with a commodity, this name in itself will enable large quantities of one or more other commodities to be sold with comparative ease, and probably little expense need be incurred in adapting the existing marketing system to the new conditions.

One aspect of the scale of business which is well worthy of separate consideration is that of retail marketing. From an economic point of view, the lowest type of shop is probably the country store, where small quantities of a large variety of goods are exposed for sale. In a higher stage of development, specialisation has taken place, and there are to be found stores of the same size as formerly, but carrying only one comparatively complete line of goods instead of numerous partial lines. As far as large retail undertakings are concerned, it is possible to distinguish three distinct and different types. The undertaking may be located in one big building and handle one line of goods on a very large scale. Or again, a concern whilst handling one line of goods on a very large scale, may sell from numerous small buildings,

that is, it may establish a chain of shops; such undertakings are sometimes described as "multiple stores." Lastly, a firm may engage in business on a very large scale from one building, but may carry several lines of goods, and then it is what is known as a "department store."

Roughly speaking, commodities for domestic consumption can be divided into two classes—those which the consumer will seek and those which must seek the consumer. The former are generally expensive articles, which are bought only after careful consideration, and these consequently can all be sold by a few stores situated in the shopping districts of large towns. Such are jewellery, books, furniture and articles of clothing. The latter are of a kind that people will not go far out of their way to buy; as soon as they have recognised the need for such an article they will seek to satisfy their demand in the immediate vicinity of the place where they happen to be. Such articles are tea, coffee, sugar and all the common and cheaper groceries. In Philadelphia alone there are at least three chains of grocery stores: the Acme Tea Co., Robinson and Crawford, and the William Butler Company, and similar chains are to be found in most of the large cities. Occasionally these stores deal in tea and coffee only, but generally they carry a full line of groceries. Where a firm carries a very fine line of grocery goods, it seldom has more than three shops, and frequently only one or two. In this case the customers are comparatively wealthy, and they are likely to lay in supplies from a central store for some time ahead, and thus be under no obligation to buy from a local shop at the moment when they require an article.

Other classes of stores providing commodities, which must be taken to the consumers, are those selling drugs, candy, tobacco, vegetables and meat. Shops of this kind are found scattered throughout the residential parts of towns, so as to be close to the consumers, although

in the case of tobacco they are also established in the business quarters of a city, so to be conveniently situated for the commercial community. This is particularly true in America of the cigar department of the tobacco trade, as can be clearly seen by observing the situation of the branches of the United Cigar Stores Company.

Two products, which are sold partly in small local shops and partly in large central stores, are hats, and boots and shoes. Most commodities are sold in both ways, but not to any such marked degree as is the case with these two articles. They seem to be very much on the border line between the commodities which the consumer will seek and those which must seek the consumer. Whilst a business conducted in a chain of small shops may be as large and employ as much capital as one carried on in a single central store, the latter makes a much bigger impression. Both enjoy the same advantages of large scale purchases, but the expenses of management may be a little higher in the first case; on the other hand, the cost of rent is likely to be a little less, as well as the cost of advertising. There is very little to choose between the two systems, and each is best in its own sphere; but it is the department store which has undergone the largest development in America. There are some large central stores handling one line of goods only, especially jewellery and books, but these are very few in comparison with the department stores, which are huge emporiums devoted chiefly to articles of domestic and office furniture, and to men, women and children's dress. In addition, many of the large houses handle goods used for sports, automobile accessories, books, china, clocks and watches, cutlery, jewellery, perfumes and soaps, photographic supplies, pictures, silverware, stationery and trunks. Occasionally a department store develops into a universal provider, and sells meat, groceries, vegetables, etc., but usually these are not very high-class establishments.

The first department store was probably that of the Bon Marché at Paris, and it was from there that the Americans obtained the idea.* These stores are aggregations of complete shops, and offer opportunities for economy and convenience. They seek, by having a small margin, to have a large turnover. It is their policy to try to inspire the public with confidence that the prices and the quality of the goods sold are all right. They practically guarantee an article to be what it claims to be, and if the purchaser has any reason to be dissatisfied he can change it, or have his money back. When a person buys from a first-class department store he feels he is obtaining a good sound article at the lowest price compatible with the quality desired. On the other hand, the lower class department stores buy up bankrupt stocks and sell the things off cheap, so that anyone understanding something about the particular line of goods may pick up a bargain.

With regard to the economies of department stores, it is doubtful, in the case of many articles, whether they can buy any more cheaply than a moderate-sized store carrying a single line of goods, but their delivery system should be distinctly less expensive owing to the large scale on which it is established. The turnover of any department in a department store should be greater than that of an individual concern of the same size, partly because the former is likely to receive more orders by post than the latter, and partly because the other departments will assist to attract customers, each department helping to advertise the others. Most of the large department stores give credit even if only in a limited way, so that they cannot claim the economies derived from dealing solely on cash terms. It is also probable that the somewhat elaborate system of management established in connection with many department stores, must prove more expensive than the simpler methods pursued by a smaller shop. In a general way, I should

* See U.S. Industrial Commission Report, vol. vii., p. 17.

be inclined to say that it is the convenience, rather than the cheapness, of a large department store which induces people to buy there.

One of the great tendencies of industrial organisation in the nineteenth century was specialisation. This does not necessarily imply that a manufacturer devoted himself solely to one process, but rather to producing a narrow range of commodities, in connection with which he did either some, or all, of the work. Thus originally in an engineering works every kind of machinery was made. Gradually separate plants were established for the production of steam engines, of textile machinery, of locomotives, of machine tools, etc. Recent years have seen a coming together again of the different classes of works. The organisation of many large engineering establishments is now almost as complex as was that of their predecessors one hundred years ago, but with one great difference. Formerly there was an absence of all specialisation; to-day there is a recognition of the limitations of specialisation. It is true that these limitations are comparative rather than absolute, and that they apply to some industries more than to others. Frequently it might pay a manufacturer to reduplicate his plant and to increase the scale upon which he is performing the processes that he already undertakes, but he does not do so because he decides it would pay him better still to do some entirely new work. One of the objects of this report is to point out what this new work is likely to be. One great aim of modern manufacturers is to obtain some kind of a monopoly. If they can secure this, their position is safer and their profits will probably be larger. If the manufacturer carries on business on a very large scale, he may seek to obtain national or international control of some product, but with such attempts this report is not concerned; it merely touches on this question in so far as manufacturers try to control the retail prices of their products.

CHAPTER IV.

INTEGRATION AND SUBSIDIARY WORK.

The nature of subsidiary work and of integral processes
 —Causes of integration—Limitation of supplies of raw material—The opening up of a new field—Superior quality of raw material required—Direct economies of integration—Limits of integration—The tendency towards differentiation—Financial and labour aspects of integration—Subsidiary work dependent on large scale production—The influence of localisation upon subsidiary work—The manufacture of special equipment—Other examples of subsidiary work.

Integration.

It is probably safe to assume that every large system of manufacturing consists of several processes, and involves a good deal of subsidiary work. Sometimes a producer contents himself with carrying out a single process; thus there are many small concerns which only weave, other parties buying the yarns and selling the cloths. On the other hand, many large manufacturers undertake several processes and do a good deal of their own subsidiary work. This latter may be of two different kinds; either it may consist of building machinery to perform a particular process, of making boxes in which to pack the finished product, of printing labels for the boxes, etc., or it may consist of utilising by-products such as the meat-packers' surplus fats for the manufacture of soap.

By integral processes are understood the various stages of manufacture which directly follow each other, as the raw material is converted into the finished product. Thus where spinning, weaving and finishing are carried on in one mill integration occurs. The same is true where a manufacturer markets his own products, but owing to the importance of this aspect of integration in America, the subject is dealt with in a separate chapter. Here an attempt is made to consider some of the causes which lead to integration, also some of its limits, and in this connection the strength of the opposite force, differentiation, will be discussed; in addition some mention will be made of the financial and labour aspects of integration. Finally, the subject of subsidiary work will be considered.

In a general way, integration and the undertaking of subsidiary work by the manufacturer enable more capital to be employed without increasing the amount of the finished product to be marketed. In the case of a speciality, where the cost of marketing is very high, this alone is an important consideration. It also enables the charges of some middlemen to be saved, and thereby tends to reduce the cost of production. In several cases, special reasons may be discovered which have led to the increased integration of an industry. Probably the most important is the limitation of supplies of raw material. The best illustrations of this are the iron and steel making industry, and the paper making industry. The supplies of iron ore are by no means exhaustless, and a large producer of iron and steel clearly recognises the advantages of controlling his own supplies of raw material. The United States Steel Corporation has pursued this policy to a very high degree. It owns, or leases, enormous ore deposits on Lake Superior, and controls a fleet of special lake steamers and railroad tracks for the purpose of transporting this ore from the mines to furnaces on the Lake shores and at Pittsburg.

In addition it owns coal-fields and a large coking plant at Connellsville. Practically all the Alabama iron producers own their supplies of iron-ore, coal, and limestone, the three products which go to make pig-iron ; but the Southern producers possess the advantage over the Northern ones, that iron, coal and limestone are found practically next to each other, which does away with the necessity for any special transportation facilities. It may be noted in passing, that the same tendency to integration has been at work in the British iron and steel industry.

In the case of paper, the International Paper Company owns large spruce forests in Canada, and has also established its own wood pulp mills. Nevertheless the company buy a good deal of wood, as they desire to save their own forests as much as possible. They also ship some of their wood as lumber to England, because this pays them better than cutting it up and converting it into wood pulp.

Various chocolate manufacturers in the United States, as also in the United Kingdom, draw some of their supplies of cocoa from their own plantations. Several American soap manufacturers have established cotton-seed oil mills in the Southern States, whilst Messrs. Lever Brothers, of Port Sunlight, in order to secure a future supply of raw materials, have cleared 2,600 acres in the Pacific Islands, and have planted 1,500 acres with cocoanut trees which will yield produce in seven years.

Another reason for the integration of an industry is the opening up of a new field. When a manufacturer first commences the production of a particular product in a new district, he is either obliged to do all his own work, or obtain some assistance from outside. Frequently the latter course would be very inconvenient, and the manufacturer prefers to be self-supporting as far as possible. This probably accounts to a very large extent for the considerable degree of integration found in the

American textile industries. Formerly when a firm wished to manufacture cotton or woollen goods, they were obliged to do all their own work, as they could not rely on getting it done elsewhere. Thus the cotton manufacturer would spin, weave and finish his own goods, and this is very frequently still the case to-day, although the finishing processes are often undertaken by separate concerns, as is shown by the following table quoted from the United States Twelfth Census of Manufacturers (see page 53).

It will be noticed that as far as yarn is concerned, all bleaching is done in independent establishments, but some three quarters of the dyeing and mercerizing is performed in the cotton mills. In the case of cotton cloth the position is almost entirely reversed, and about four fifths of the bleaching, dyeing, printing and mercerizing is undertaken in independent establishments.

When the older Philadelphia worsted factories were established they were obliged to comb, spin, weave and finish, as there were no facilities for having any of these different processes performed elsewhere. At the present time there are several firms which comb and spin, and others which weave, and of these latter some generally do their own dyeing and finishing, but not always. In the New England States there are three or four mills which only comb. Large manufacturers, who carry on all the processes, are not always able to supply their looms, and consequently buy tops and yarn in the market. The woollen factories are usually equipped with their own carding and spinning machinery and looms, so that they are able to do all their own work.

A third cause of integration is the superior quality of the material required. This probably explains why the makers of certain very fine textile goods do all their own preliminary work, though one can never be sure that it is not caused by the difficulty of obtaining the class

DYEING AND FINISHING IN COTTON MILLS AND IN INDEPENDENT ESTABLISHMENTS IN 1900.

PROCESS.	IN COTTON MILLS.		IN INDEPENDENT ESTABLISHMENTS.		TOTAL.	
	Quantity, 000 omitted. lbs.	Value, 000 omitted. \$	Quantity, 000 omitted. lbs.	Value, 000 omitted. \$	Quantity, 000 omitted. lbs.	Value, 000 omitted. \$
Yarn :						
Bleached ...	...	—	12,700	250	12,700	250
Dyed ...	...	5,460	54,100	2,220	205,700	7,680
Mercerized ...	...	320	900	160	3,000	480
Total Yarn treated	...	5,780	67,700	2,630	221,400	8,410
Cloth :						
Bleached ...	...	1,000	965,000	6,600	1,163,000	7,600
Dyed ...	...	1,300	559,000	7,600	685,000	8,900
Printed ...	...	5,200	949,000	16,000	1,233,000	21,200
Mercerized ...	...	—	8,000	400	8,000	400
Total Cloth treated	...	7,500	2,472,000	30,600	3,089,000	38,100
Total value ...	...	13,280		33,230		46,510

of yarn required, or through old established custom. Thus for example, while the J. & P. Coats establishments in America spin all the yarn they require for the manufacture of sewing cotton, the British mills of the same firm buy large quantities of fine yarn. A good example of a large establishment which does its own preliminary work, in order to obtain a fine class of material for the principal processes, is the J. B. Stetson Company of Philadelphia. This firm makes fine lines of hats, and in order to obtain sufficient supplies of felt of a good quality, it prepares all that it requires from skins which it buys.

Occasionally direct economies may be derived from the integration of processes; thus there are distinct advantages in a steel plant being equipped with its own blast furnaces. In the first place the steel manufacturer has greater control over the iron which he himself has smelted from the ore, and secondly there is a saving of a large amount of heat energy which would be lost were cold iron to be used in preparing steel.

With regard to the limits of integration, it does not appear possible to say anything very definite. An important consideration is the variety of the raw material to be used. Thus manufacturers of fancy cotton goods generally buy their yarns; they require small quantities of several kinds of yarn, which fact alone would suffice to prevent them from doing their own spinning, but further the sale of their goods largely depends on fashion. If they get an order, they require the yarn immediately to fill it. As they get a good price for their product, they do not mind paying a little more for the yarn, providing they can obtain it at once.

Occasionally a manufacturer finds it more profitable to increase his works along the line of his principal product, rather than to undertake new functions. Thus, it might be expected that the Baldwin Locomotive Works, which

use a very large quantity of steel, would enter into the iron and steel business; but on the contrary, they continue to buy the steel they require, and keep on increasing their output of locomotives. A large firm of carpet manufacturers, like John and James Dobson of Philadelphia, buy the raw wool direct and spin the worsted yarns which they require for the manufacture of their carpets. On the other hand they buy all their jute yarn, and have never attempted to make it themselves. Probably this is because they consider that it pays them better to expand along other lines, especially as jute spinning would be an entirely new kind of undertaking about which they might understand very little.

In some cases a manufacturer can apparently produce more efficiently if he limits himself to one or two processes. In other words, differentiation is sometimes more economical than integration. There would seem to be a gradual tendency in the American textile industries towards differentiation, and this has probably been carried furthest in the neighbourhood of Philadelphia. There are now in the States a good many concerns which merely spin, or merely weave, but it is still largely customary for the manufacturers of cotton sheetings and greycloths to spin their own yarns. This is no doubt due to the limited quantity of yarn to be bought, which leads the manufacturers to fear that at any moment it may be impossible to obtain American yarns, and the high duty almost prohibits the importation of coarse yarns.

There are, however, in the New England States several mills devoted entirely to spinning cotton yarn, and some of these have united to form the New England Cotton Yarn Company. One thing which has tended to check differentiation in the American cotton industry is the isolation of so many of the mills, and as a result of this, practically every American textile mill has its own machinery repair shop. On the other hand, in a highly

localised industry, like the boot and shoe industry, a considerable amount of differentiation may be observed, and it is somewhat uncommon to find a manufacturer doing much of his own preliminary work, such as tanning his own leather. A large firm of boot and shoe manufacturers, like Messrs. Rice & Hutchins of Boston, do tan a great deal of leather, but they use only a small part of it, and much of it they sell. This is largely explained by the great variety of leathers required in the boot and shoe industry; besides it would not pay to do any tanning at all, unless done on a fairly considerable scale. Some manufacturers, such as the W. L. Douglas Shoe Company, submit the sole leather, which they buy, to a special treatment in order to render it more waterproof, but generally speaking the boot and shoe manufacturer buys all the leather, which he requires, ready prepared. He may do some subsidiary work, such as making his own cardboard boxes, but frequently he limits himself to the manufacture pure and simple of boots and shoes. In the case of shoes for women and girls, he frequently does not even do this, but buys his soles ready cut and also very likely his box toes. At Lynn, Mass., the great centre of the women's boot and shoe trade, sole cutting has become an important industry. The sides of leather, from which the soles are cut, vary in thickness and consequently yield different kinds of soles. For making men's shoes, inner and outer soles are used, which enables better and poorer qualities of leather to be employed, but in the case of women's shoes, there is frequently only one sole, and a manufacturer restricting his activity to one or two lines, would have difficulty in using up his leather if he cut his own soles. He would be obliged to sell the rest, whereas now he frequently prefers to buy his soles ready cut. The manufacturers of men's shoes generally cut soles for their own use, but this does not prevent them from buying and selling soles whenever a favourable

opportunity offers. What has been said of soles, is to some extent true of box toes, and the cutting of these exists as a separate industry. If a boot and shoe manufacturer makes numerous and varying styles, he frequently finds it more economical to get his box toes cut, as there can then be no loss if the shapes go out of use. This applies to both men's and women's shoes. To some extent, heels are made by separate manufacturers. As a general thing, there appears to be a growing tendency towards differentiation among the boot and shoe manufacturers who cater for the middle classes.

The development of differentiation would seem to be largely limited by the extent to which the product is standardised. A manufacturer cannot buy parts of his product, ready made, unless he knows what he is getting. Thus at the present time the organisation of the automobile industry is very unsettled. Some manufacturers buy all their parts, assemble them, and sell the cars, others make almost everything which is required themselves, and between these two extremes there are numerous concerns which manufacture some of their parts and buy others. It is doubtful whether the automobile industry is sufficiently standardized at present to admit really successfully of such extreme differentiation as the mere assembling of parts. On the other hand this has been encouraged by the doubtful legality of certain essential patents in the automobile industry, as already mentioned in a previous chapter.

With regard to the financial aspects of integration the fluctuations in profits are greater where an industry is highly integrated than where an industry is less integrated. In the case of an integrated industry when the selling price rises the cost of production does not increase, but when the price goes down the producer cannot reduce the cost, because he owns everything himself. In the case of a non-integrated industry, cost and price rise and

fall more or less together. When the raw material is owned by the same people that manufacture, there is not the same chance of obtaining compensation as where this is not the case.

One labour aspect of integration of industry may be mentioned. In the Southern States many ironworks own coal mines. Several firms of pig iron producers in Alabama pay their coal miners wages according to a sliding scale, that varies, not with the price of coal, which is quite indifferent to the firms, but with the market price of pig iron.

Subsidiary work.

Unlike integration, subsidiary work depends entirely on large scale production. In the South there are quite small mills that spin and weave cotton goods, but generally no firm will undertake to do subsidiary work unless it produces on a large scale. Exceptions may exist in the case of plants which are isolated, and cannot easily obtain outside assistance. The case of the J. B. Stetson Company can be quoted as a general example of a large concern doing a good deal of its own subsidiary work. Its primary function is to make felt hats, but it also weaves the ribbons it requires for bands and for binding, and makes cardboard boxes and prints labels for same.

One thing which affects subsidiary work to a large extent, is the localisation of an industry. If an industry is highly localised there is a tendency for the manufacturer not to do his own subsidiary work. Thus, a very large number of factories for the manufacture of men's and boys' boots and shoes are collected in and around Brockton, Mass. Generally speaking, these manufacturers do very little of their own subsidiary work, and there exist in Brockton numerous factories for pro-

ducing lasts, dies, patterns, elastic goring, tacks, shoe tools and machinery, paper and wooden boxes, labels, etc.

Occasionally a manufacturer who desires some special equipment is obliged to make it himself, thus the Brown & Sharpe Manufacturing Company of Providence R.I., were originally clock makers. In 1859 a contract was taken for making Wilcox and Gibb's Sewing Machines. In order to perform the work satisfactorily, the Company found it necessary to make machine tools, gauges, etc. Gradually this subsidiary work has become the principal part of the business. The Company still makes sewing machines, but the principal products are machine-tools and machinists' tools.

The looms used by the J. B. Stetson Company for weaving ribbons are built in the machine shops of the factory. In this way the Company is better able to obtain the sort of machine they require. In the machine shop of the Gorham Manufacturing Company some of the machines and tools are made, which the company uses in the manufacture of silver and bronze ware.

A large packing firm, such as Armour & Co., do a great deal of subsidiary work. They make all the tin cans they require, besides the wooden boxes and kegs; and they also build their own refrigerating cars. They do their own printing, and utilise their by-products to the utmost extent. Thus they are manufacturers of glue, soap and manure, and the large scale on which they conduct business enables them to prepare such a product as suprarenalin, to secure a pound of which over one hundred thousand sheep have to be killed.

Occasionally a producer undertakes subsidiary work in order to facilitate and increase the principal object for which he is established. This is partly true of some of the railroad companies. Thus, the Canadian Pacific Railroad owns and manages several hotels. It has also established lines of steamers both on the Pacific and on

the Atlantic Oceans, partly doubtless with a view to increasing its railroad traffic. The same policy with regard to hotels and steamers is pursued by many British railway companies.

Several railroads in the States have large interests in coal mines. This is due to their desire to obtain cheap fuel, but they also hope to increase their freight traffic. The Canadian Pacific Railroad has large locomotive and carriage building works at Montreal, and the Pennsylvania Railroad builds equipment and undertakes repairs in its great shops at Altoona, Pa.

CHAPTER V.

THE ESTABLISHMENT OF RETAIL STORES
BY MANUFACTURERS.

The sale of mechanical specialities—Boot and shoe manufacturers' shops—The retail stores of the Tobacco Trust—The United Cigar Stores Company—The United Cigar Stands Company—The National Cigar Stands Company—The chocolate and candy business—Manufacturers with single retail stores—The "Mail-order" system.

WHEN a manufacturer's product is such that it can all be sold in the shopping district of any town, then he may be able to establish his own stores and retail his own product; but if the product is one that must be sold all over the town in order that it may be sold successfully, as, for example, sugar, then he must sell it through ordinary trade channels. Manufacturers in several lines of business have established retail stores in the United States, but it is impossible to ascertain what proportion of their product they market through their own stores. In dealing with this subject it is necessary to distinguish between different classes of retail stores established by manufacturers. The simplest case is that of mechanical specialities, such as sewing machines, cash registers, typewriters and automobiles. It is desirable that the salesman should possess considerable technical knowledge, best acquired by being trained in the manufacturer's factory; also it is necessary to offer facilities for making repairs in various localities.

This is most easily done by the direct establishment of retail stores, or the granting of an exclusive agency to some existing store. In the case of these mechanical specialities a good deal of the product of the factories is also sold through travellers.

The case of cameras is very similar to these mechanical specialities, and the Eastman Company market all their products through exclusive agencies. The company restricts the number of dealers in a given district, and sees that they are distributed evenly throughout the district. In deciding who is a dealer, Eastmans do not judge by the quantity handled, but the facilities for displaying a full line of goods. In this way the professional photographer is practically barred from receiving discounts.

Boots, shoes and hats are examples of a different class of direct selling. It is possible to establish shops which deal in nothing else but these products. Further, such stores need be located in the shopping districts only. Some of the Danbury hat manufacturers have established chains of stores, but it is the stores of the boot and shoe manufacturers which are by far the best known. There is a tendency for independent boot shops to act on the principle of carrying very few makes only, so that the manufacturer's exclusive store is merely an extension of this principle. There are probably a dozen well-known and highly-advertised brands of boots and shoes which are sold through the exclusive stores of the manufacturers. Anyone who has visited a large American city cannot fail to have seen the Douglas, Regal, Emerson, Crawford, Walk-over, All-America and other well-known Shoe Stores. The W. L. Douglas Shoe Company claim to have over 70 exclusive stores in different parts of the United States, but a large part of their product is disposed of by general shoe dealers, of whom more than 11,000 handle the Douglas Shoe. On the other hand, the Regal Shoe Company sell practically the whole of

their product through their 122 exclusive stores, and supply only very few agents. Taking the boot and shoe industry as a whole, only a very small proportion of the product is sold direct through the manufacturers' retail stores. Some of the large makers distribute direct to the retail trade, but the majority of the business is probably done through jobbers scattered throughout the country.

An advantage which the boot and shoe manufacturers derive from the establishment of their own stores is that it brings them into closer touch with the market, and they are able to judge better of changes in demand, than if they sold through jobbers. Further they are able to obtain more advantage from the large amount of advertising which they do.

The principal reason for the establishment of retail stores by the Tobacco Trust appears to have been a desire to push their business and to meet competition where tobacconists refused to handle their goods. Originally the American Tobacco Company sold to retailers under certain restrictions. In particular, a condition was imposed that they were to sell no competing article in certain lines; for example, cheap cigarettes. A retailer was also restricted with regard to fixing prices. It was essentially in order to secure an outlet for cigars that the American Tobacco Company entered the retail market by means of stores and stands. They seem to have got the idea from England, where the Imperial Tobacco Company during the tobacco war sought to secure control of the retail market by the purchase of Salmon and Gluckstein's. Up to 1901 the American Tobacco Company hardly dealt in cigars at all, and whilst in all other lines the well-known brands they owned secured them a fairly certain entry into the market, this did not hold true of cigars. The Trust obtained control of a considerable part of the Cuban output, but the large New York importers of cigars

preferred to deal with the independent producers, and the Trust found a difficulty in selling its cigars. To overcome this opposition they established retail stores and stands, and are just commencing the policy of establishing cigar distributing houses in different parts of the country. The United Cigar Stores Company, which is the name of the subsidiary company through which the Trust retails some of its product, has now more than 450 stores in the principal cities in the United States. Some 80 per cent. of their business is in cigars, and they are situated only where a cigar trade is likely to exist. They are frequently found in the business quarters of a city in addition to the better residential portions. The sites of the stores are very carefully chosen, and a corner is nearly always preferred. Sometimes they take over an existing store, but only if it is in a favourable position.

To reach another part of the public, the American Tobacco Company has established two further subsidiary companies, viz., the United Cigar Stands Company and the National Cigar Stands Company. The first establishes, in the outskirts of large cities, stands equipped with Trust goods, in small shops where candy, newspapers, etc., are also sold, the district not being suitable for the establishment of an independent tobacco store. The second undertakes to provide drug stores with handsome well-equipped stands, and supply tobacco at a rate yielding a slightly greater profit than dealing with a wholesale house would permit of, on condition that the drug stores handle Trust goods exclusively.

The relation of the American Tobacco Company to drug stores has been the source of considerable discussion. It has been said on fairly reliable authority that the American Tobacco Company has built a drug factory in order to establish joint drug and tobacco businesses in small places, where it would not pay to set up a store for tobacco alone. On

the other hand, this statement is denied on good authority, and it seems probable that the Trust controls only the tobacco stands in drug stores, and is not in any way directly interested in the drug business, although it is possible that some of the men, who are connected with the American Tobacco Company, are also interested in the drug business.

The case of chocolate and candy is somewhat similar to tobacco, and several manufacturers of these products rely on disposing of goods partly through their own stores and partly through the general channels of the trade. In many cases it is very probable that the manufacturing part of the business has grown out of the retail store. One large concern which disposes of its product through its own stores, and through agents distributed throughout the country, is Huylers, who own some 40 stores in the larger cities of America, but it is only in Huylers' own stores that their products can be bought otherwise than in the sealed boxes and packages.

There exists another class of producers who establish a single retail store, or at the most two or three, but who rely on disposing of the bulk of their product through the ordinary channels of trade. In this case such retail store or stores appear to be established largely for advertising purposes, as, for example, when large publishing houses carry on a retail book business through a store established in New York, Boston or Philadelphia. The J. B. Stetson Company owns one retail store in Philadelphia at which its hats are sold. The Gorham Manufacturing Company of Providence, R.I., has one large store in New York for the sale of its silver and bronze ware. John and James Dobson own a shop in New York for the sale of their carpets. Several of the New England textile mills retail their remnants and seconds in the town where their mills are situated. Taken as a whole, this class of retail store is of small consequence.

One other important way in which the manufacturer can deal direct with the consumer is through the "mail-order" system. In this case the manufacturer advertises his products for sale, and invites people to order goods by letter. These are then despatched to the customer's address through the post, or by express company, or as freight. This system is employed by several ready-made clothing manufacturers, also by furniture makers and to some extent by boot and shoe manufacturers, but it is utilised to the greatest extent by a few large distributing houses dealing in a very large range of goods, some of which they manufacture, but most of which they purchase in a manner very similar to a big department store. Two of the largest houses engaged in this class of business are Sears, Roebuck and Company and Montgomery, Ward and Company, both of Chicago. The business of these houses is purely retail, but no goods are sold over the counter, all orders being received through the medium of the post. Several of the large department stores carry on some of their business in this way. The system does a lot of harm to the stores in small towns whose inhabitants find that the "mail-order" house offers them a far larger selection to choose from than the local store. Consequently they buy a good deal on this system, and would probably use it even more were it not for the delay in obtaining goods and the cash terms on which they are sold. Further, the fact that there is no parcels post system in the United States checks the growth of the "mail-order" business. The thing which hinders its development in England is the absence of any "cash on delivery" system.

CHAPTER VI.

THE CONTROL OF RETAIL PRICES BY
MANUFACTURERS.

The use of trade marks, etc.—The reasons for which the manufacturer desires to regulate the retail prices—Self-protection—To facilitate charging different prices in different parts of the same country—The English book trade—The American book trade—The United Shoe Machinery Company—Photographic materials—Silverware—Sewing cotton—Boots and shoes—Collars and Cuffs—Baking powder.

It is probably correct to say that the ideal of most manufacturers is to obtain a monopoly. This may be based on transportation facilities, or on the control of the supply of raw material, or again, on patents or favourable location. In many cases, however, it is impossible to obtain a monopoly in any of these ways, and the manufacturer seeks to reach the same end by creating an individuality for his goods. This may be done either by selling his product in sealed boxes, or packages, or by clearly marking his goods with a trade mark, or his name, and then it will be necessary to draw the attention of the public to the goods by advertising. If the goods are intended for the domestic market this will probably answer his purpose very well, especially if the consumers are women, as they are far more tenacious with regard to the use of a commodity than men. Men usually look at consumption merely from a business point of view, and want the best article they can get for

their money. If a woman has become accustomed to a particular article she will probably continue to buy it in preference to others, even though they may be somewhat cheaper and better. This is probably one reason why sugar manufacturers have recently commenced to make up sugar in bags and sealed packages. One cannot travel very long in America without seeing the conspicuous advertisements of Crystal Domino Sugar, which is a kind of lump sugar that is sold in 5 lb. packages only; similarly Arbuckle Brothers sell much of their white granulated sugar made up in bags. Several brands of coffee are sold in tins only; as, for example, the Hotel Astor Coffee, and Lion Brand Coffee. A great many biscuits are made up in packages weighing one half pound or more, and during the past year the National Biscuit Company report a considerable increase in the sale of their trade mark goods. In England the same sort of thing occurs in the case of tea, large quantities of which are sold in sealed packages. Trade marks also play an important part in the sale of such an article as sewing cotton, so that even after the owners of several brands have amalgamated, the firm controlling the business continues to place the various brands upon the market; and the same thing is true of tobacco.

When once a manufacturer has established himself fairly firmly in his monopoly he desires to fix, to some extent at least, the retail prices of his products. He is strengthened in his desire by the fact that it is just the prices of trade mark goods which the retailer desires to cut. If a shopkeeper, in order to advertise his store, wishes to reduce the price of some of the goods which he sells, he naturally chooses those the value of which is fairly well known to the consumer, and thus nothing suits his purpose better than some trade mark goods, whose nature and prices are freely advertised by the manufacturer. In consequence of this, the producers of certain articles find themselves in a peculiar position.

The retailers are willing to buy these goods at the price fixed by the manufacturer, and they find a ready sale for them at a small profit, or even at cost price or below. For a short time this would prove perfectly satisfactory to the manufacturer, who would dispose of large quantities of his goods, but he is frightened of a reaction occurring in the long run, and consequently he feels obliged to insist on retail prices being maintained. He is afraid that his market will be spoiled, and he wishes to protect the small wholesalers and retailers from the competition of the large department stores, which are willing, on account of their large turnover, to sell at a small profit, or for purposes of advertising to sell at cost price, or even at a loss. If this continues, the small men will refuse to handle his goods, and the manufacturer will find the number of his customers reduced. Again, if the public comes to regard a certain abnormally low price as the normal price, it will become difficult to restore the old price, and ultimately the retailers and wholesalers will come back on the manufacturer and insist on a reduction of the prices at which they buy. The manufacturer of fine products is sometimes influenced in his desire to control prices by the fear that low prices will spoil his reputation, as the public might easily associate cheapness with inferior quality. All this goes to show that it is really in self-protection that the manufacturer seeks to regulate retail prices. This, however, cannot be said always to be the case. Occasionally he is anxious to control retail prices, in order to sell at different prices in different parts of the same country. This applies especially to the oil sold by the Standard Oil Company, who charge different prices not only in different States of the Union, but in different parts of the same States. To some extent this also occurs in the case of the products marketed by the American Tobacco Company.

Generally speaking, retailers object to the fixing of

prices by the manufacturer, and occasionally this leads to friction. Thus in England, the Proprietary Articles' Trade Association sought to dictate terms to the Co-operative Wholesale Society, as to the price at which the articles of members of the Association should be sold. The Wholesale Society resented the dictation. The Association withheld supplies, and the Society has commenced to manufacture many of these articles for itself.

The most striking case of friction between producers and retailers, occasioned by the restriction of the terms of retail sales, is in the English book trade. Formerly booksellers might sell books at any price they chose, but gradually the small booksellers were brought to the verge of ruin by a system of undercutting. To protect the small shop, which handled some books, from the competition of the large booksellers, the publishers introduced the nett book system, which came into operation on January 1st, 1900. Under this system no nett book might be sold at a discount. The booksellers accepted the agreement, and everything worked well, until the establishment of the "Times" Book Club. The Club undercut prices in selling off its supplies, offering large discounts to purchasers of books, which were practically new. It also offered new books for sale at a special discount. This dealt a heavy blow to the booksellers, who called upon the Publishers' Association to assist them in defending the nett system. After consideration, a period of six months was fixed as the life of a new book, during which time it was not to be sold at a reduced price. The "Times" alone rejected this definition, and thus the book war commenced.

In America somewhat similar agreements existed in the book trade, the American Association of Publishers having copied the English plan. The Association did not wish to fix prices, and each publisher might charge what he chose for a book, and only when the publisher

had fixed the price, did the Association step in and require the retailer to keep to that price. At first some of the small publishers remained out of the Association, but they soon discovered, when they sent their travellers round to the booksellers, that the latter were unwilling to buy from those publishers who were not members of the Association, and so all the publishers were brought into line. The original object of the agreement was to save the booksellers from being ruined by the competition of the big department stores which are large dealers in books and very fond of cutting prices. Almost all the booksellers approved of the agreement, the chief exception being the large New York department store, R. H. Macy and Company. This store was cut off from all direct supplies, and several lawsuits between the Association and the firm followed. Both the department store and the Association claim to have had the best of the litigation, so that it is impossible to say what the exact position is to-day. After a time the Association dropped its concerted action for fear of being charged with conspiracy in restraint of trade under the anti-trust laws. At present each of the more important publishers (some 35 or 36, apart from law or medicine) notifies the retailers to whom he sells, that books are sold on the following terms only : on new copyright nett books the price must be maintained for one year; on other new copyright books no discount exceeding 28 per cent. must be granted for one year. This applies especially to fiction, and is done to meet the wish of the department stores to sell \$1.50 novels for \$1.08, the department store being the best customers of the publishers in many lines. The discounts which a bookseller may grant to a library on new copyright books are 10 per cent. and 33 $\frac{1}{3}$ per cent. off the retail prices of nett and discount books respectively. The system has existed about five years, and it has now become customary to publish all new copyright books at nett prices, except fiction and juvenile books.

Probably the most striking cases of the control of sales to the consumer by the manufacturer is that exercised by the United Shoe Machinery Company in the sale of its products. This company owns about 1,700 patents, and makes some 250 machines. Of these machines a few, which are absolutely essential to the shoe manufacturer, cannot be made by any other machinery makers. The company refuses to sell its machines, and will only lease them for a royalty of so much per pair of shoes made. In leasing the essential machines, which cannot be procured elsewhere, the United Shoe Company stipulates that these machines shall not perform an operation on any shoe, certain parts of which have not been made with the company's machinery. In this way the company is able to lease machines which might under other circumstances be obtained from independent shoe machinery makers. At the present time a great deal of agitation is going on in Massachusetts to introduce legislation with a view to regulating the terms of machinery leases, but so far nothing has been enacted, and in any case it is doubtful if such an act would be constitutional.

Somewhat similar are the terms of the Eastman Kodak Company, which refuses to sell to any dealer who handles products of any other photographic manufacturer. Further, the dealer must sell at catalogue prices. These prices enable him to make a small profit, and if, after selling the goods, he signs a voucher certifying he has sold at catalogue prices only, he receives a rebate.

The Gorham Manufacturing Company refuses to sell its silver and bronze ware to any store which cuts their prices, and under no circumstances will they sell to the silver departments of the department stores.

Domestic sewing cotton is sold on similar conditions to retailers, and if it passes through the hands of wholesale houses, it is on the understanding that the retailers will sell it at certain fixed prices. If retail prices

are reduced, the offending retailer and wholesaler, if the latter has handled the goods, are cut off from supplies.

The large boot and shoe manufacturers usually insist that their finer products, on which the name of their firm appears, shall be sold at the advertised prices. Some phonograph dealers will not allow prices to be cut, and refuse to sell to any firm who cuts prices, or who has sold to a firm which cuts prices.

In the dry goods business there is very little price regulation by manufacturers, as the retailers are strongly opposed to it. One example is afforded by Earl and Wilson, large shirt, collar and cuff manufacturers, who will sell to such retailers only who enter into a written contract to maintain prices. These may not even be cut at "sale" times, and Earl and Wilson undertake to change goods which a retailer finds he cannot sell. Cluett, Peabody and Company try to fix the retail prices of the shirts, collars and cuffs which they manufacture, but they have no written contracts.

There is one firm of neck-wear manufacturers who definitely fix prices, but generally the producers of these lines content themselves with suggesting prices, placing the purchaser under no obligation to follow them. The same is true of the sale of the products of the National Biscuit Company.

In the case of baking powder, the manufacturer sometimes seeks to fix prices, largely in order to prevent the dealer from making a "leader" of such goods. The method employed is to offer the dealer a special allowance of 6 per cent. as an inducement to maintain prices, but apparently the Royal Baking Powder Company does not always succeed very well in keeping up prices, and the same may be said of the offers of the drug and soap manufacturers.

CHAPTER VII.

THE MANUFACTURE AND MARKETING OF RELATED PRODUCTS.

The desire of the manufacturer to obtain a steady demand for his products—The use of the same labour and machinery for making different products—Illustrations from the automobile industry—Other examples—Considerations of marketing facilities may indicate line of extension of works—Various illustrations—Undertaking a new function to please customers—The manufacture of competing products—The sale of related articles.

IN discussing the reasons why a manufacturer may produce, or market, related products, it is necessary to bear in mind that various reasons may influence him with regard to the same articles. In a general way a manufacturer can hope to produce more cheaply if he restricts his activities to the production of one article. On the other hand, the demand for one article is necessarily less steady than that for two, or more, articles, consequently the manufacturer is always seeking to hold the balance between cheap production and steady demand for his products. In view of the fact that the economies of large scale production become comparatively slight after a time, especially in the case of some industries, manufacturers to-day appear to be giving increasing attention to attempts to obtain a steady demand for their products. If they decide to undertake the manufacture of a new commodity they will probably seek one which is in some way associated with, or related

to, the one which they already make. Their choice is likely to be guided by the consideration that it would be most economical if they could employ some, at least, of the same labour and machinery in the manufacture of the new commodity as is employed for the old. In the first place, they would understand better the technical work connected with the new development. Secondly, less expenditure of new capital and labour would be required; and, lastly, and probably this is the most important consideration, in case the demand for one of the two articles they manufacture falls off, they can increase their output of the other article with far less expense and trouble than if the two articles required entirely different labour and machinery.

This point is well illustrated by the manufacturers of automobiles. One frequently finds that motor cars are made by a concern which was formerly engaged in the manufacture of some other commodity. Thus several cycle makers have turned their attention to the manufacture of automobiles. For example, the Pope cars are made by the same people as produce the Columbia cycle. In other cases it is gas engine makers who have extended the sphere of their activities; for instance, the Olds Motor Works originally made gas engines; and in England we find Crossley Brothers Ltd. making motor cars in addition to gas engines. At least one large firm of carriage makers, namely, Studebaker Brothers, of South Bend, Indiana, have commenced to make automobiles under the name of the Studebaker Automobile Company. Another example is afforded by the American Locomotive Automobile Company, of Providence, R.I., which is subsidiary to the American Locomotive Company.

Other English engineering firms besides Crossley's, which have entered into the automobile industry, either directly or by means of subsidiary companies, are Armstrongs, Vickers, Sons and Maxim, Beyer Peacock

and Thorneycrofts. Generally speaking, the English motor car industry has developed from the cycle manufacturing trade.

Another reason for the addition of an automobile manufacturing department to a works engaged in some other line of business is that this is a comparatively new industry, in consequence of which the competition in marketing should be limited, and the old firms fancy that additional capital can be employed more profitably along a new line, where there would be little trouble in marketing the product, than in re-duplicating their old works.

Similar conditions are found in other industries. Thus one big firm of pickle manufacturers has developed a large jam and preserve business. In the same way a big biscuit making concern undertakes the manufacture of cakes. In connection with a dyeing and cleaning establishment a laundry will frequently be found.

Sometimes consideration of marketing facilities will indicate to a manufacturer along what line to extend his business. Either the purchasers of a particular article necessarily require another article in order to use the first, or the consumers of certain products are likely to require other products of a somewhat similar character, which can easily be marketed by the same salesmen. The users of sewing machines must have sewing cotton, and at one time it was said that the Singer Manufacturing Company were about to commence the manufacture of sewing machine cotton. This would appear to be a perfectly natural extension of Singer's business, though in this particular case the advisability of attempting it would be doubtful, owing to the very strong position held by J. and P. Coats Ltd. in the domestic sewing cotton trade. As a matter of fact Singer's content themselves with having sewing cotton made by sewing cotton manufacturers and selling it with labels bearing their own name in addition to that of the manufacturer.

Examples of two products which can easily be marketed together are afforded by coffee and sugar. A few years ago Arbuckle Brothers, the large coffee dealers, commenced to handle sugar in addition to coffee, and the Sugar Trust retaliated by obtaining an interest in the firm which makes the Lion brand of coffee. English firms which produce several different articles, the relationship of which appears to lie in the facilities for marketing, are Messrs. Faulder, of Stockport, who own, in addition to their large preserve factory, a chocolate works and toffee factory, and Messrs. Colman, of Norwich, who produce both mustard and starch.

Occasionally a manufacturer, or dealer, undertakes a new function in order to satisfy the wishes of his customers. Armour and Company, in addition to their large meat packing business, have established an egg and butter preserving department. This is not so much because they can find a market for these products, but in order to assist the farmers from whom they buy their cattle. One large wholesale grocery establishment in New York has added a provision department to its business, the firm selling the butter, cheese and eggs on commission. These products are consigned to them by their country customers, who have received them in payment for groceries sold to farmers. It is not a remunerative business, and is chiefly done to oblige and secure customers.

In the case of some fairly old businesses, new departments appear to have been added without any particular reason, other than that new capital was being invested along the lines of least resistance. Thus John and James Dobson, of Philadelphia, manufacture not only carpets, but also blankets, worsted goods, cotton and silk plush, velvet and imitation fur. The various mills are scattered about and have been bought, or built, as favourable opportunities offered. Although the products are all textiles, they cannot generally be sold together, as the

selling departments have to be situated in different parts of New York, according to where the particular trade is located; consequently facilities for marketing the various products cannot be given as the reason for the collection of the different industries under one management.

Other examples of large firms performing different functions are afforded by some of the big English engineering works. Messrs. Mather and Platt, of Salford, combine the manufacture of textile machinery, gas engines, pumps, sprinklers and electrical apparatus. The British Westinghouse Company at Trafford Park make gas engines and steam turbines, in addition to electrical apparatus, but this appears to be with the view of providing complete electrical equipments.

Occasionally a producer is interested in the manufacture of two products, the connection between which is, that they are strong competitors. The Standard Oil Company, in addition to refining and marketing petroleum, is interested in the production of certain other competing oils. Sometimes in American cities there will be found one company controlling the production and sale of both gas and electricity, just as in England the municipalities often own the gas and the electricity works.

Often a manufacturer, instead of both making and selling a commodity related to his original product, contents himself with buying such a commodity and selling it in his own name. Generally he does this when a market for such a product exists, and yet its manufacture would involve him in an entirely new kind of undertaking. Thus Studebaker Brothers, the large carriage manufacturers, sell harness; the Singer Sewing Machine Company sell sewing cotton; the Spool Cotton Company (the United States selling house of J. and P. Coats Ltd.) are exclusive agents for large Redditch makers of needles. In England the Maypole Dairy Company, which controls the supplies of dairy products, also sells tea. Occasionally the manufacturer is almost

forced to buy some product merely to sell it again, in order to meet the public demand. The J. B. Stetson Company, of Philadelphia, whose name is well known in connection with the best qualities of felt hats, sell straw hats, which are made for them with their name stamped in, in order to meet the requirements of their customers. Also the manufacturers of men's and boys' boots and shoes purchase ladies' and girls' boots and shoes, in order to be able to supply a complete line of goods.

Certain manufacturers buy goods for purposes of sale, merely to facilitate the direct selling of their own product. Large manufacturers of fine worsted goods, like Folwell Brothers and Company, of Philadelphia, will sell woollen goods made by other manufacturers in addition to their own cloths, in order to provide sufficient occupation for their travellers. Boot and shoe manufacturers, who establish retail stores of their own, sell goloshes and snow shoes made by rubber manufacturers. Ice dealers frequently sell wood and coal, presumably in order to utilise their distributing system during the winter when the demand for ice is comparatively small.

CHAPTER VIII.

THE POSITION OF THE MIDDLEMAN.

Three classes of middlemen—Manufacturers' insufficient capital—The growth of direct marketing by manufacturers—The disappearance of line of demarcation between wholesalers and retailers—The position of the middlemen in the textile industries—The difference between a broker and a commission man—Conditions in the boot and shoe industry—The marketing of grocery products—Biscuits—Sugar—The sale of oil—The marketing of tobacco—The book trade—The meat packing industry—The glass trade—The marketing of chemicals—The iron and steel trades—Hardware—Subsidiary selling companies—The attitude of wholesalers to manufacturers who sell direct.

IN American trade it is possible to distinguish at least three different classes of middlemen—the broker, the commission man and the jobber or wholesale dealer. In the case of the cotton industry, there is also the converter, who buys cloth in the grey and sends it to various concerns to be bleached, dyed, printed and finished. He generally has an office in New York, as this is the best market in which to sell printed goods. Occasionally the manufacturers will have goods finished on their own account, in accordance with the advice of the commission house through which they sell, and then sell the goods through that house. Sometimes jobbing houses buy goods in the grey and have them prepared for placing on the market.

Until fairly recently all goods were sold through the agency of one or more of these middlemen, and probably one of the principal reasons for this was want of capital on the part of the manufacturer. In many industries, especially the textile industries, the manufacturer has had barely enough capital to carry on manufacturing, let alone selling, and he has been obliged to rely very largely on the advances made by the commission houses. This is still true to a considerable extent of the Southern cotton mills, but less so of some of the large textile mills of the New England States.

In comparing English and American conditions with respect to marketing, it must be remembered that the cost of marketing in the United States is exceedingly high on account of the very large area to be covered, and the absence of any one well-recognised central marketing town. In spite of this there has been of recent years a steadily growing tendency for the manufacturer to do at least part of his own marketing. The chief objection to the use of the commission house, from the manufacturer's point of view, is that he remains in ignorance of the names of the customers to whom his goods are sold, and he is rapidly recognising that his hold on the market is far from strong. Also the growth of the large department store has tended to do away with the middleman, as these stores generally refuse to buy from the jobbing houses, and desire if possible to obtain their supply direct from the manufacturer. The middlemen have not failed to recognise that their position is being undermined in many trades, and they are seeking to meet this difficulty by obtaining an interest in, if not complete control of, the mills whose product they sell.

Another important reason for the displacement of the middleman has been the growth in size of the manufacturing concerns. When these were established on a small scale only, it did not pay the manufacturer to keep up a selling staff of his own, but with the growth of the

separate concerns and the increase in the specialisation of the product, it has become worth while for the manufacturer to do his own selling. This is especially true of many commodities to which the law of increasing returns applies strongly, as these commodities are probably specialities, and consequently difficult to market. A further cause contributing to the displacement of the middlemen is the development of credit agencies, which enable the manufacturer to sell direct even to smallish men.

Of late, the lines of demarcation between wholesalers and retailers have become much obscured, and in the States jobbing houses and retail stores frequently go hand in hand. In some cases this is done perfectly openly. Thus Marshall Field and Company, in Chicago, have a large wholesale house, and an enormous department store. To avoid causing friction with the customers of its wholesale house, the Marshall Field department store makes no attempt to push its "mail-order" business; further, it refuses to send in estimates for furnishing country hotels, if it learns that a local customer of the wholesale department is competing for the work. In a similar manner Arnold Constable and Company, of New York, combine a retail and a wholesale business.

On the other hand, a large jobbing house like the H. B. Claflin Company, in New York, has a big interest in some thirty department stores in different parts of the States, but these are not carried on under its own name. Several large jobbing and retail houses own, control or have an interest in manufacturing concerns. John Wanamaker, besides his Department Stores in New York and Philadelphia, owns two white goods factories in the Schuylkill Valley. The H. B. Claflin Company own a white goods factory in New York, and very many of the large wholesale houses and department stores take the whole product of small factories.

It is not possible to make any sweeping generalisations

with regard to the displacement of the middleman, and it is necessary to consider the conditions in leading industries separately in order to understand the present position.

Textile Industries.

In the cotton and the woollen industries very few goods are sold direct by the manufacturer, most of the product of the mills being disposed of through commission houses in New York, Boston, Philadelphia and Chicago, and in some cases through brokers. The business of the broker is to bring the buyer and the seller together, and he is generally used only where the goods are comparatively highly graded. The commission house stores the goods, advances money on them, sells them in its own name and guarantees payment of accounts to the manufacturer. In return for this it receives a 5 per cent., or 6 per cent., commission, interest on advances, a small percentage to cover insurance, and frequently a discount of 1 per cent., or 2 per cent., in addition. The broker generally receives $1\frac{1}{2}$ per cent. to 2 per cent. brokerage. Comparatively few goods are disposed of through the broker, the print cloths of Fall River being probably the principal goods sold in this way; on the other hand, cotton yarns are generally marketed through commission houses. Yarn is a simple thing to sell, and one might expect it to be sold through brokers, but for two reasons at least it is largely handled by the commission houses. In the first place, the spinners, especially from the South, wish to have money advanced to them; and in the second place, a manufacturer likes to go to one man and buy all the various kinds of yarn he requires, and a commission house is better able to meet this requirement than a broker. There is probably a growing tendency for the yarn business to be done through brokers, especially as the spinners become financially strong.

It is largely physical conditions which account for the existence of the commission man in the sale of cotton goods. The buyers are scattered and the distances great, so that it hardly pays a mill to have its own travellers. In the silk business conditions are different. Most of the silk manufacturers of Jersey City and Patterson have selling agencies in New York, and the Western buyers go there to buy. It is also possible for a small staff of salesmen to visit the buyers of silk goods, as these are comparatively limited in number.

A few of the larger cotton and woollen mills have established selling agencies of their own, but in almost every case they manufacture fine goods; thus almost all the Philadelphia carpet manufacturers sell their own product either direct to jobbers, or to large retailers. The American Woollen Company has dispensed with commission houses entirely and sells direct to jobbers and manufacturing clothiers. Also the fine worsted manufacturers, such as the Lorraine Manufacturing Company of Pawtucket, R.I., and Folwell Brothers and Company, of Philadelphia, have their own selling houses in New York. The makers of textile specialities, such as sewing cottons and sateens, do their own selling, as do most of the large shirt, collar and cuff manufacturers of Troy, N.Y. This may only mean that goods are disposed of without passing through the hands of a commission house or broker, but frequently the jobber's services are also dispensed with.

Several of the large hat factories appear to do their own selling. The J. B. Stetson Company has an office in New York and fifteen travellers throughout the country, who deal mostly direct with retailers and very little with jobbers.

Recently in England a good deal has been heard about "going direct" in the home trade, and the wholesale houses do not appear to have taken at all kindly to it. Two stages can be distinguished in the movement. The

one is where the manufacturer seeks to create an individuality for his goods by attaching a striking ticket to them and by stamping his name, or trade mark, on the selvedge. In addition he advertises them by announcements in suitable newspapers and by show-cards in the shops where they are sold. He may be contented with identifying himself in this manner with the goods he produces and continue to sell them as before through wholesale houses. On general principles the manufacturer seems perfectly justified in pushing the sale of his goods amongst the public, if the wholesale houses do not do it to his satisfaction. The second stage in the movement is where the manufacturer goes beyond creating an individuality for his goods, and sells direct to the drapers. Frequently in order to establish such a selling department on a paying basis he is obliged to buy in stock, so as to be able to offer a more complete line of goods to his customers.

From what has been said above, it will be seen that there is a tendency in England for manufacturers to do away with middlemen as there is in America.*

Boot and Shoe Industry.

Whilst a certain number of well-known boot and shoe manufacturers sell their product direct to the consumer through their own retail stores, or to the retailers through their own distributing agencies, the greatest proportion of the shoes made in Massachusetts are sold through the large Boston and New York jobbing houses. It may be noted that it is generally the finer qualities of shoes which are sold direct under the name of the manufacturer, whilst in the case of the coarser qualities of shoes disposed of through the jobbers, the manufacturer's name falls away, and in

* For more details about conditions in the English Cotton Industry, see the *Manchester Guardian*, March 8 and 12, 1907.

its place the name of the jobber or retailer, who sells them, is stamped on the shoes.

One large firm, manufacturing boots and shoes, commenced to do their own jobbing, because independent jobbers were unwilling to handle goods bearing the manufacturer's name. On the other hand, some of the Western boot and shoe jobbers have begun to manufacture on their own account.

Groceries.

Nearly all the grocery products are handled through jobbers, and only very seldom is there any tie with regard to the prices at which the goods are to be sold. One of the principal exceptions is biscuits and crackers. This industry is very largely in the hands of the National Biscuit Company, which is an amalgamation of several independent manufacturers. This company sells a very considerable part of its product direct to the retailers. They have distributing agencies in most of the big cities of the United States, and deliver their goods by means of their own horses and carts.

From the point of view of this company there is more than one advantage in direct selling. A jobber's salesman is able to sell 10 or 12 leading lines of biscuits, but to sell the 200 kinds made by the National Biscuit Company requires a biscuit expert. Such a man is able to advise the grocer what lines to stock, and what quantities of each kind, taking into consideration the popularity of the different biscuits, and also their keeping qualities. If a grocer, following the advice of one of the company's salesmen, stocks too large a quantity of a particular line, the company is willing to take it back. The firm's salesman also arranges displays of biscuits for the different grocers, so that they will attract the customers' attention. New York is probably the best market of the company, which employs as many as one hundred salesmen in that city.

It may be noted in passing, that Huntley and Palmers, the large English biscuit manufacturers, have fairly recently established a system of direct selling to retailers, though on somewhat different grounds. The chief reason was the keenness of competition with other biscuit manufacturers, who were willing to grant larger discounts than Huntley and Palmers to the wholesale dealers. It is the financial instability of some firms, rather than their smallness, which obliges Huntley and Palmers to continue to do some of their business through dealers.

Though the sugar industry is principally in the hands of one large undertaking, there does not appear to have been any attempt to displace the jobber. Probably the reason for this is that the Trust can get its distributing done more cheaply through the jobbers than it could do it itself. This is accounted for by the fact that sugar is almost universally treated as a "leader" in the grocery business. In other words, the wholesale dealers, as well as the retailers, tend to sell sugar at cost price as an advertisement. Wholesale dealers are not slow to recognise the objections to this policy, seeing that sugar accounts for anything between 10 per cent. and 20 per cent. of their business, but as the sale of sugar at about cost price is such a generally recognised thing, it would be exceedingly difficult to make any alteration, although such a change has been brought about in other trades. Thus formerly white lead, linseed oil and turpentine were employed as "leaders" in the chemical trade, but the dealers succeeded in coming to an understanding, in consequence of which these products are now sold on terms which yield a profit, though not a very large one.

Oil.

The Standard Oil investigation has shown how completely the jobbers have been removed from the illuminating oil business. This has been facilitated by the peculiar conditions connected with the transportation

of oil. Usually it is not barrelled, but delivered in tank cars, and no one can handle it unless he has the necessary tank apparatus in which to hold it on removal from the car. One result of the control of the distributing trade by the Standard Oil Company is that the company is able to fix different prices in different parts of the United States. The Bureau of Corporation's investigation of the Standard Oil Company shows that some 90 per cent. of the oil dealers in the United States belong to, or are controlled by, the Standard Oil Company, and that barely 10 per cent. are independent. Of these latter the majority are wholesale grocery concerns, supplying a limited amount of oil, in barrels, to retailers.

The control over retail prices exercised by the Standard Oil Company owing to its own system of distributing is very marked. The following are the average gross prices paid by retailers for medium grade oil, December, 1904, and average prices less freight, by States :—

States.	Gross Price.		Nett Price.
	Cents per gallon.		Cents per gallon.
Maine	11'5	.....	10'4
Pennsylvania	9'3	.....	8'7
Delaware	8'4	.....	7'7
Florida	15'0	.....	12'8
Ohio	9'0	.....	8'5
Kansas	12'7	.....	11'4
Alabama	14'4	.....	11'6
Texas	13'1	.....	11'6
Colorado	18'5	.....	16'2
North California	13'6	.....	12'4
South ,, ...	8'4	.....	7'2

With regard to these figures, it may be noted that where the price is low, competition is keen. The

existence of oil wells in Southern California accounts for the strong contrast in price between the Southern and the Northern part of that State.

Occasionally, in order to meet competition, the Standard Oil Company undertakes the retail delivery of oil in tank-waggon.

Tobacco.

The American Tobacco Company sells almost all its product through jobbers, with the exception of certain small areas in the Southern part of the States, where it is necessary to give very long credits. In the large cities, the American Tobacco Company generally controls some of the wholesale houses through which it does the majority of its selling. In the country districts it is possible to find some jobbing houses, which are able to sell Trust goods a little cheaper than other wholesale dealers, and there can be no doubt that some connection exists between these houses and the Trust. The independent men are generally wholesale grocers or wholesale druggists. The Trust could not distribute its goods without these men, and consequently does not want to offend them by selling direct to retailers. Even the United Cigar Stores Company buys through the wholesaler controlled by the Trust.

In the case of the independent tobacco manufacturers, there seems to be a growing tendency to deal direct with the retailers. By this means the 10 per cent. commission charged by the jobbers for guaranteeing accounts is partially avoided. (It is shared between the manufacturer and the retailer.) Also the manufacturer finds that in this way he can obtain a more secure hold of his trade, and spread it over a larger area, both of which are important advantages in the face of the Trust competition.

Although the Trust sells most of its product through the jobber, this does not prevent it from pushing its

business. Sometimes it employs the quantity system, by which the amount of tobacco the jobber has to buy in any one year exceeds that bought in the previous year. His profits come to him by means of rebates or discounts, and unless he has sold the stipulated amount, he finds he has made no profits. Another method is that of direct shipment. The jobber secures the order from the retailer, to whom the manufacturer ships the goods direct, but payment is made through the jobber. An order placed in this way must be fairly large, and the retailer obtains the tobacco at a slight reduction. Under the combination system a retailer is offered a favourite brand of tobacco at a reduced price, on condition that he takes some other specified tobacco at the same time. Another policy pursued by the Trust is to pay to the salesmen of independent jobbers a commission of one cent per pound on all Trust tobacco they sell. This is done to encourage the sale of Trust tobacco as against the sale of private brands, the manufacturers of which frequently allow the jobber a larger commission than the Trust does, in order that he may be willing to push the sale of their products. Formerly the Trust stipulated that jobbers should not cut prices, but this stipulation appears to be no longer made.

Book Trade.

In the book trade there are few jobbing houses, but all larger booksellers deal direct with the 35 or 36 more important publishers (not including medical and law publishers). The booksellers write daily about any special books which they may require, and they are visited three or four times a year by the publishers' salesmen, when they buy books in considerable quantities for stock, and on these purchases they receive larger discounts than when they order single copies. The terms for odd copies are 25 per cent. discount off nett book prices and 40 per cent. off others,

and 10 per cent. additional when ordered in larger quantities. Thus a bookseller pays 90 cents for a single copy of a \$1.50 novel, and 81 cents, that is, 90 cents less 10 per cent., for larger quantities. To the one or two book jobbers in Chicago and New York, who buy in large quantities, the publishers generally sell at 5 per cent., or 10 per cent., lower prices than to the retail booksellers. The jobbers are able to dispose of their purchases only to very small people, who cannot deal direct with the publishers; they buy in large quantities, say 5,000 novels at 77 cents, and if they misjudge the market, all their profit is likely to be swallowed up by the loss on the remainder. If they buy only a few copies they generally obtain no better terms than the large retail bookseller.

In the United States there are no large remainder booksellers like Glaisher's, or Grant's, in London. An American publisher holds his stock much longer than an English one, chiefly because it is usually electrotyped.

Meat Packing Industry.

In order to distribute their product, large packers establish wholesale houses in different cities, and sometimes several in the case of a large city. Through these they sell probably 99 per cent. of their dressed meat to the butchers, and a very large percentage of their packed goods, although some of these are handled by the wholesale grocers. The packers' wholesale establishments sell entirely to retailers and not to consumers, with the partial exception of some large buyers, such as hotels.

Glass.

The Pittsburg Plate Glass Company which has a large control of the plate glass business in the United States, has established distributing branches in various parts of the country, which have tended to drive out the jobbers.

Chemicals.

Jobbing in the chemical industries is much influenced by the cost of transportation. The weight and the bulk of chemicals is often considerable in proportion to value. Consequently it is desirable that they should be shipped direct to the consumer—frequently a manufacturer—whenever the quantities warrant it, and thus the jobber does not carry large stocks in his warehouse, and transacts a good deal of his business on paper, receiving a brokerage, or commission, as the case may be. If the dealer is the agent of a manufacturer for a particular district, he will receive a payment from the manufacturer, when a buyer from his district goes direct to the manufacturer. In other cases where the manufacturer has no particular agents, he will generally protect dealers by charging the direct buyers the dealers' prices plus commission. In competing lines the manufacturer is practically obliged to make use of the dealers, as the connections between dealers and customers are frequently strong.

A large alkali manufacturer will appoint one firm general sale-agents, and this firm appoints sub-agents. A big firm of medicinal drug manufacturers in Philadelphia sells direct to retail dealers only, making a small reduction in price if a large quantity is taken, but not allowing commission to jobbers. The same is true of one or two firms manufacturing special dyes.

Iron and Steel.

During the past ten years the number of middlemen dealing in pig-iron, steel billets, etc., has steadily decreased, and many manufacturers now refuse to sell except direct to the consumer. This is partly because the commission agent, or jobber, quotes a price for future delivery below that quoted by the producer,

and relies on a fall in price occurring before it is necessary to cover his contract. Other dealers hear lower prices are being quoted for a certain quality of iron, and lower their prices accordingly. Ultimately the manufacturer is obliged to drop his, and he objects to having his hand forced in this way.

Hardware.

Hardware is sold almost entirely through jobbers, but sometimes when there is a question of pushing some particular line, the manufacturer will go direct to the retailer, whilst at the same time protecting the jobber. A padlock manufacturer will have a card made up, bearing twelve padlocks arranged in pairs. He will sell as few as two of these cards to a retailer. If the padlock takes on, and the retailer requires more, he has to get them through a jobber, who is thereby forced to handle the goods. In the same way a maker of specialised tools may go to the retailer. In the case of mechanical specialities, such as typewriters, sewing machines, cash registers, and motor cars, the manufacturer almost always goes direct to the consumer, by establishing either branch houses, or agencies, in different parts of the country.

Machinery manufacturers generally dispose of their product directly by correspondence, agents or salesmen. This is more particularly the case where the machinery to be sold is of a detailed and specialised character, which makes it desirable to have a salesman who has been trained in the works.

The large agricultural implement makers, such as the International Harvester Company, sell almost their entire product by means of local agents, who are distributed throughout the agricultural districts.

With regard to the mechanism of direct selling, it may be observed that where a manufacturing concern under-

takes to do its own selling, it frequently establishes a subsidiary company for this purpose, rather than do this work in its own name. The large manufacturer is probably influenced by more than one reason. In the first place, he is anxious to avoid taxation by arranging that the company which is to be established in different States of the Union, and in various foreign countries, shall have a purely nominal capital, thereby offering little temptation to the taxation authorities. In the second place, selling through a small subsidiary company tends to prevent the successful investigation of a monopoly, or in any case it may assist the manufacturer to overcome some of the anti-trust laws. In the third place, a central selling agency enables a number of nominally separate concerns to do their marketing jointly. This may really mean that the concerns are closely combined. The scheme appears feasible only where the product is standardised. In the fourth place, large companies, which are amalgamations of several different firms, may find it desirable to retain much of their identity, which will be most easily attained by selling through one office, as this is more economical, and does away with any fear of unintentional competition.

Large concerns which employ subsidiary companies to do their marketing are J. and P. Coats Ltd., who sell through the Central Agency Ltd. in the United Kingdom, and the Spool Cotton Company in the United States; the Amalgamated Copper Company, who market their products through the United Metals Selling Company; the Singer Manufacturing Company, who sell through the Singer Sewing Machine Company; and the United States Steel Corporation, who sell abroad through the United States Steel Products Export Company.

In conclusion, a word may be said with regard to the attitude of jobbers towards manufacturers, who sell part of their product direct to retailers and part through wholesale dealers. It varies in different industries. The

large dry goods wholesalers do not object to buy from manufacturers selling to retailers, providing they will enable the jobber to make a fair profit. In the West some of the wholesalers have banded together refusing to buy from manufacturers who sell to retailers, and this appears to apply to the wholesale grocers even in the East.

CHAPTER IX.

CONCLUSION.

HAVING reached this stage of the report, it may not be out of place to attempt to sum up some of its chief points. The object of this essay has been to indicate a few leading tendencies of the present-day organisation of industry in the United States. Great stress has been laid upon the importance of the personal factor in the development of business enterprise. This applies both to employers and to employees. On the one hand, the great ambition and energy of manufacturers and merchants is emphasised, and, on the other, I have attempted to show how considerable is the influence of the spirit of democracy and equality amongst the working classes, and indirectly of their pride and self-respect, in contributing to the commercial and industrial progress of the United States. In this connection I spent a most interesting and instructive quarter of an hour in watching the operatives of a large Newark cotton mill leaving their work at dinner time. The women were neatly dressed in cotton blouses and dark skirts, and nearly all carried umbrellas or parasols to protect themselves from the hot mid-day sun, the temperature being over 90°F. in the shade at the time. The men were wearing ordinary lounge suits and felt, or straw, hats. Every man and woman was as well dressed as the clerks and stenographers, who can be seen leaving any office in New York every evening. The explanation is that workpeople would be ashamed to be seen on the streets in their working clothes, and consequently change before commencing and after finishing work. They keep

overalls or old clothes at the factory, and they appear outside dressed like any other American citizen. The clogs, the shawls, the mufflers, the corduroy and other working suits, which can be seen in a Lancashire cotton town every weekday, are unknown in America. In the States, democracy and equality are not things which largely exist in spirit; they are something tangible and real. The American-born workman has more in common with his employer than a mere vote; he dresses like him, he talks like him and he behaves like him. In other words, the line of demarcation between employer and employee is very much less pronounced in America than in the old countries of Europe. In the absence of class distinctions and in the equality of opportunities lie two of the great secrets of American success in business.

It is almost impossible to produce evidence to show to what extent people are moving upwards in the scale of society, and an investigator is obliged to content himself with ascertaining the opinion of those best qualified to judge of such matters, in addition to any personal inquiries he may make. There can be little doubt that a workman stands a better chance of improving his position in America than in Europe. This is partly accounted for by the fact that the former is a much newer country than the latter, and that it is developing much more rapidly, in consequence of which the opportunities are greater for displaying the ability, the energy and the initiative which mark a man as fitted to occupy the higher positions in industry and commerce. Another important factor is the comparative absence of class distinctions in the States, which enables a man to improve his position not only financially but socially, and this factor is doubly powerful in that its significance is clearly grasped by the working classes. In Europe there is a tendency for people to consider themselves as born in a certain sphere, and to fear that they will be regarded as presumptuous if they seek to rise above it. Probably it is the absence

of appreciation, if not the absolute discouragement, which they receive from their fellow workers, quite as much as the possible antipathy of those whose ranks they may wish to join, which deters working men from striving to improve their position. We are all very much the slaves of custom and convention, and dislike finding fault with the conditions and surroundings under and among which our fathers and mothers were content to live. Parents have a tendency to say, what was good enough for them is good enough for their children, and in this contention they have practically the unanimous support of their friends. Thus young people are too frequently brought up to regard their present position as proper and right, if not as inevitable, and it is the absence of the wish to rise, as well as of the opportunity to rise, which distinguishes the European from the American working classes.

The facilities for a man to improve his position differ in various industries. In the Lancashire cotton industry very many of the large employers of labour are self-made men, and the same is true of the textile machinery business. In all these cases success was achieved in the days when the lot of the working classes was far rougher than it is to-day, but when the chances of a capable individual rising from the ranks was greater than at present. The extension of the joint stock form of management, both in this country and America, has had an important bearing on this question. I should be inclined to say that it has made it more difficult than formerly for a workman to show that he possesses business ability, but easier for a man to rise who has once proved his business ability. In a limited company there is no one who observes the employees as closely as a partner or owner of a private concern, and there is less chance of capable workpeople being marked out for promotion. On the other hand, it would be wrong to say that there are no opportunities for rising, for very

frequently the position of works manager, or something corresponding to that, is occupied by a man who has passed through the works. This is especially true in those industries where a comparatively small theoretical training and little general education are necessary. Thus workmen stand a much better chance of rising in the cotton trade than in the engineering industry. In a town like Burnley, a weaver can rent accommodation in a shed together with power, and need provide looms only, and may be able to save or borrow the necessary capital. As the cotton business of Lancashire is highly developed there will be little difficulty in buying the yarn and selling the finished cloth.

Once a man has proved his business capacities, the prevalence of the joint-stock system of management is likely to assist him, because it is not necessary to own much stock in a concern in order to act as a director; whereas it is usually necessary for a partner to provide a fair amount of capital. Further, partnerships in many concerns are reserved for members of the family of the proprietor.

There is one way at least in which the company form of organisation hinders individuals from setting up for themselves, though only indirectly, in so far as it has tended to increase the scale upon which production is conducted. The control of certain industries appears to have passed into the hands of a few large concerns, and in those industries the only chance a man has of improving his position, is by rising within those firms. In America this is probably easier than in England. There large firms seem to be more on the lookout for capable young men than is the case here. It is quite common for a man to pass from one kind of business to another, from the Civil Service to business, or from a profession to business. Because an American has got on well in

one career, that is no reason for not adopting another. This is as true of the professional and business classes as of the industrial classes. Several secretaries and assistant secretaries of the United States Treasury have entered banking houses and trust companies, and these are by no means the only civil servants who accept positions in commerce. Generally speaking, there can be little doubt that mobility of labour in America, both vertical and horizontal, *i.e.*, movement from a lower to a higher scale in economic life and movement from one occupation to another within a given sphere of life, is greater than in the old countries of Europe. As in the case of a workman rising, it is prejudice, as much as want of facilities, which prevents a European from changing his vocation as easily as an American. As far as artisans at least are concerned, it may partly be attributed to the fact that the American workman is less highly skilled than the European, labour-saving devices taking the place of skill to a considerable extent in the States. With regard to business men, the explanation appears to lie in the greater recognition in America of the value of a sound grasp of commerce and industry, quite apart from a knowledge of the details of any particular business or trade.

In the body of the report mention is made of some aspects of industrial finance in England and the States. A point of considerable practical importance is the relation of banks to industry and commerce in the different countries. In some parts of England, as, for example, in Manchester, the chief manner in which the banks assist business enterprise is by giving overdrafts to commercial houses. On this system a bank permits a merchant to overdraw his account to a certain extent, and charges the interest daily on the exact amount overdrawn, if any. In the States, a bank makes a loan to a firm for a definite period, at the end of which the paper has either to be met, or renewed if the bank is willing.

Both systems seem to offer certain advantages, but the American method tends to work somewhat hardly in the case of a merchant whose foreign customers get into temporary difficulties owing to the failure of a crop, etc. This is generally given as one of the reasons for the comparative failure of the United States to sell in certain foreign markets. In Germany the large banks do much to encourage business enterprise by promoting industrial companies, subscribing for shares and by being represented on the board of directors. In America the banks and banking houses play a large part in the formation of the syndicates which underwrite issues of industrial stocks and securities, but seldom have a permanent interest in manufacturing concerns. In England a manufacturer, as such, obtains comparatively little help from the banks.

With regard to the second part of the report, in which some attempt is made to analyse the methods and tactics of modern manufactures, it must be emphasised that the same sort of development is going on in England as in America. At some places this has been brought out in the report, but perhaps hardly sufficiently. Whilst the department store is essentially American there are similar institutions on a smaller scale in England. On the other hand, the "multiple" firm, with its grocery or other shops scattered throughout the country, has reached its highest development in the United Kingdom. In several cases these firms are large producers of the articles they sell, have their own tea plantations in Ceylon and India, manufacture jams, cakes and biscuits, and manage large dairy farms. In the same way the big butchering "multiple" firms do their own importing, even if they do not possess their own ranches abroad. Another type of retail establishments which plays a very important part in the industrial towns of the North of England, but which is practically unknown in the United States, is the co-operative society, which is often a

combination of a department store and a chain of small branch shops.

In what concerns the size of large industrial undertakings, it is probable that businesses are conducted on a bigger scale in America than in Great Britain, but this is principally due to the difference in physical conditions. In making any comparison care must be taken to avoid being deceived by the nominal capitalisation of the different concerns, as the so-called trusts are very frequently greatly over-capitalised, though with regard to some of the most successful ones the contrary appears to be the case.

The same tendency for a manufacturer to perform more than one function is at work in England as well as in America. The Lancashire cotton industry is highly differentiated, but, apart from this, there are plenty of examples of integration and of manufacturers doing their own subsidiary work, whilst many producers of trade mark goods are combined together in the Proprietary Articles Association to regulate retail prices.

Although in many ways it is possible to compare English and American conditions, it must not be forgotten that the economic position of the two countries is fundamentally different. There is a large industrial element in the United States, but North America is essentially a great agricultural country, which in addition possesses enormous mineral wealth. This alone explains why there is no equivalent in England to some American problems. With regard to labour again, the United States has especial difficulties of its own. On the one hand, there is the assimilation of the great hordes of foreign immigrants, and on the other the negro question. Further, the vast area of the United States as compared with that of the United Kingdom accounts for many differences between American and English conditions, especially in what relates to transportation. All comparisons between the economic conditions of the two

countries are subject to important qualifications; nevertheless there is much of interest to be learnt by an Englishman visiting the United States, and in this report an attempt has been made to indicate roughly some of the chief impressions received by the writer during a nine months' stay in America.

INDEX.

A

Accounting, 15.
Acme Tea Co., Philadelphia, 45.
Advertising, 13, 17, 18, 19, 46.
Agricultural implements, 39, 41.
Amalgamated Copper Co., 94.
American Association of Publishers, 70, 71.
American attitude towards business, 7.
American Locomotive Automobile Co., Providence, R.I., 75.
American Telephone and Telegraph Co., 31.
American Tobacco Company, 19, 63, 64, 65, 69, 89.
American Woollen Company, 84.
Anti-Trust laws, 26, 71, 94.
Arbuckle Brothers, New York, 68, 77.
Armour & Co., Chicago, 59, 77.
Arnold Constable & Co., New York, 82.
Articles of domestic consumption, Two classes of, 45.
Automobile industry, 26, 57, 75, 76.

B

Baking Powder, 73.
Baking Powder Company, Royal, 73.
Baldwin Locomotive Works, Philadelphia, 33, 54.
Biscuit industry, 68, 86.
Biscuit Company, National, 68, 73, 86.
Bonds, Convertible, 31.
Bon Marché, Paris, 47.
Book Trade, 65, 70, 90, 91.
Book Club, "Times," 70.
Boat and Shoe industry, 39, 41, 56, 62, 63, 66, 73, 85.
British Westinghouse Co., Trafford Park, Manchester, 78.
Brokers, 80, 83.
Brown & Sharpe Manufacturing Co., Providence, R.I., 59.
Brown University, Providence, R.I., 10.
Burnham, Williams & Co., Philadelphia, 33.
Business enterprise, Manifestations of, 15.
Butler & Co., William, Philadelphia, 45.

C

- Canadian Pacific Railroad, 59, 60.
Candy business, 65.
Carpet and Rug industry, 41, 84.
Causes of commercial and industrial progress, 7, *et seq.*
Central Agency Ltd., Glasgow, 94.
Chain of Shops, 45, 46, 62.
Character of ownership of manufacturing establishments, 20.
Chemical industry, 92.
Chocolate business, 51, 65.
Cigar Stands Company, National, 64.
Cigar Stands Company, United, 64.
Cigar Stores Company, United, 19, 46, 64, 89.
Claflin Co., H.B., New York, 82.
Class distinctions, 8, 9, 10, 11.
Classes from which labour is obtained, 9.
Coats Ltd., J. & P., Glasgow, 54, 76, 78, 94.
Coffee, 68, 77.
Cluett, Peabody & Co., Troy, N.Y., 73.
Colman Ltd., J. & J., Norwich, 77.
Collar and Cuff industry, 73, 84.
Commercial Courses at Universities, 13.
Commission men, 80, 83, 84.
Common Schools, 33.
Common Stock, 27, 28.
Community of interests, 25.
Companies, Formation of, 21, 34.
Companies, American and English, 21, 34.
Companies, Incorporated, 19, 34.
Companies, One-Man, 27.
Company organisation, 21—34.
Concerns, Incorporated, 19—34.
Concerns, Partnership, 33.
Constable & Co., Arnold, New York, 82.
Control of a corporation by one man, 26, 27, 28.
Converter, 80.
Convertible bonds, 31.
Co-operative retail establishments, 101.
Co-operative Wholesale Society, Manchester and Newcastle, 70.
Corporations, 19—34.
Corporations, Formation of, 21—31.
Cotton Goods, 41.
Crossley Brothers Ltd., Manchester, 75.

D

Debentures, 24.
 Department Stores, 18, 19, 45—48, 69, 71, 72, 81, 101.
 Differentiation, 50, 55—58, 102.
 Division of labour, 39.
 Dobson, John & James, Philadelphia, 33, 55, 65, 77.
 Douglas Shoe Co., W. L. Brockton, Massachusetts, 56, 62.
 Dyeing and finishing in cotton mills, etc., 53.

E

Earl and Wilson, Troy, N.Y., 73.
 Eastman Kodak Co., 62, 72.
 Efficient production, 37, 38, 42.
 Employment of University graduates, 12.
 Encyclopedia Britannica, 19.
 English Soap Trust, 43.
 Evidence of Jacob H. Schiff before Insurance Investigation Committee, 23.

F

Faulder & Co., Ltd., H., Stockport, 77.
 Field & Co., Marshall, Chicago, 82.
 Folwell Brothers & Co., Philadelphia, 79, 84.
 Foreign labour in American Mills, 9, 10.
 Formation of companies and corporations, 21—34.

G

Glass industry, 41, 91.
 "Going direct" in the home trade, 84.
 Gorham Manufacturing Co., Elmwood, R.I., 32, 59, 65, 72.
 Grocery products, 86, 95.

H

Hardware trade, 93.
 Harvard University, Cambridge, Massachusetts, 11, 34.
 Hat industry, 54, 58, 62, 79, 84.
 Hosiery and Knit Goods, 41.
 Huntley & Palmers Ltd., Reading, 87.
 Huyler's, New York City, etc., 65.

I

Imperial Tobacco Co., 63.
 Incorporated Companies, 19, 23.
 Industrial Finance, 13, 14, 19, 100.

Industries and trades :

- Agricultural implements, 41.
- Automobile, 26, 57, 75, 76.
- Baking powder, 73.
- Biscuit, 68, 86.
- Book, 65, 90, 91.
- Boot and Shoe, 39, 41, 56, 62, 63, 66, 73, 85.
- Carpets and Rugs, 41, 84.
- Chemical, 92.
- Chocolate and Candy, 51, 65.
- Collar and Cuff, 73, 84.
- Glass, 41, 91.
- Grocery, 86, 95.
- Hardware, 93.
- Hat, 54, 58, 62, 79, 84.
- Hosiery and Knit goods, 41.
- Iron and Steel, 39, 40, 41, 50, 54, 92, 93.
- Leather, 41, 56.
- Liquors, Malt, 41.
- Meat packing, 39, 41, 42, 91.
- Oil, 69, 87, 88, 89.
- Paper and Woodpulp, 41, 50, 51.
- Photographic materials, 62, 72.
- Sewing Cotton, 68, 72, 84.
- Shipbuilding, 41.
- Silk, 41, 84.
- Silver Ware, 65, 72.
- Soap, 51.
- Sugar, 68, 77, 87.
- Textile (Cotton Goods), 39, 41, 52—55, 58, 81, 83.
- Tobacco, 41, 89.
- Woollen and Worsted, 40—42, 52, 55, 79, 83.
- Insurance Investigation Committee, 23, 30.
- Integration, 49—58, 102.
- International Harvester Co., 93.
- International Paper Co., 51.
- Iron and Steel Trade, 39, 40, 41, 50, 54, 92, 93.

J

- Jobbers, 80, 82, 84, 85, 86, 89, 95.

L

- Labour, Foreign, in American mills, 9, 10.
- Labour saving devices in commerce, 15, 16.

Large scale production, 38, 40, 58, 74.
 "Leaders," 73, 87.
 Leather industry, 41, 56.
 Lever Brothers Ltd., Port Sunlight, Cheshire, 17, 51.
 Liquors industry, Malt, 41.
 Localisation of industries, 58.
 Lorraine Manufacturing Co., Pawtucket, R.I., 84.

M

Macy & Co., R. H., New York, 71.
 "Mail-order" system, 66, 82.
 Management, Corporate or Joint Stock, 21, 22, 23, 98, 99.
 Manifestations of business enterprise, 15.
 Marketing facilities, 76, 77.
 Marketing, Retail, 44.
 Marshall, Field & Co., Chicago, 82.
 Massachusetts Institute of Technology, Boston, 11.
 Mather & Platt Ltd., Salford, 78.
 Maypole Dairy Co., 78.
 Meat packing industry, 39, 41, 42, 91.
 Mechanical specialities, 61, 93.
 Middlemen, 30, 50, 80, 92.
 Montgomery, Ward & Co., Chicago, 66.
 Multiple Stores, 45, 101.

N

National Biscuit Company, 68, 73.
 National Cash Register Co., Dayton, O., 32.
 National Cigar Stands Co., 64.
 Natural Food Products Co., Niagara Falls, N.Y., 32.
 New England Cotton Yarn Co., 55.
 New York University, 14, 15.
 New York University School of Commerce, 13.
 Notes, Short time, 30, 31.

O

Occupations and professions of University graduates, 12.
 Oil Company, Standard, 22, 24, 69, 78, 87, 88, 89.
 Oil trade, 69, 87, 88, 89.
 Olds Motor Works, 75.
 One-Man Companies, 27.
 Over-Capitalisation, 28, 102.
 Oxford and Cambridge Universities, 34.

P

- Paper and Woodpulp industry, 41, 50, 51.
- Partnership concerns, 33.
- Pennsylvania Railroad Company, 30, 31, 60.
- Photographic materials, 62, 72.
- Preferred Stock, 27, 28.
- Prices, Retail, 68, 71, 88.
- Princetown University, 12.
- Production, Efficient, 37, 38, 42.
- Production, Large scale, 38, 40, 58, 74.
- Proprietary Articles' Association, England, 70, 102.
- Publishers, American Association of, 70, 71.
- Publishers' Association, London, 70.

R

Railroads :

- . Canadian Pacific, 59, 60.
- Pennsylvania, 30, 31, 60.
- Southern, 31.
- Regal Shoe Co., Brockton, Massachusetts, 62.
- Retail marketing, 44.
- Retail prices, 68—71, 88.
- Retail stores of manufacturers, 61—65, 82.
- Rice and Hutchings, Boston, 56.
- Robinson & Crawford, Philadelphia, 45
- Royal Baking Powder Co., 73.

S

- Salesmanship, 14, 15.
- Salmon & Gluckstein, London, 63.
- Scale of production, 40, 41.
- Sears, Roebuck & Co., Chicago, 32, 66.
- Self-education, 10.
- Self-protection of manufacturers, 69.
- Selling direct, 43, 61—66, 79, *et seq.*
- Sewing Cotton, 68, 72, 84.
- Shares and stocks, 24.
- Shipbuilding industry, 41.
- Shoe Machinery Company, United, Boston, 39, 72.
- Shoe Trade, Boot and, 39, 41, 56, 62, 63, 66, 73, 85.
- Shops, Chain of, 45, 46, 62.
- Short time notes, 30, 31.

Silk industry, 41, 84.
 Silverware, 65, 72.
 Singer Manufacturing Co., 76, 78, 94.
 Soap Industry, 51.
 Soap Trust, English, 43.
 Southern Railroad, 31.
 Specialisation, 48, 82.
 Specialities, 37, 61, 82, 93.
 Spool Cotton Co., New York, 78, 94.
 Standard Oil Company, 22, 24, 69, 78, 87, 88, 89.
 Steel Corporation, United States, 24, 50, 94.
 Steel Industry, Iron and, 39, 40, 41, 50, 54, 92, 93, 94.
 Stetson Company, J.B., Philadelphia, 54, 58, 59, 65, 79, 84.
 Stock, Common and Preferred, 27, 28.
 Stock watering, 28, 29.
 Stores, Co-operative, 101.
 Stores Department, 18, 19, 45, 48, 69, 71, 72, 81, 101.
 Stores, Manufacturers' retail, 61—65, 82.
 Stores, Multiple, 45, 101.
 Studebaker Brothers, South Bend, Ind., 75, 78.
 Subjects of study at the Universities, 13, 14, 15.
 Subsidiary selling companies, 25, 26, 64, 94.
 Subsidiary work, 38, 42, 49, 50, 56, 58, 102.
 Sugar industry, 68, 77, 87.
 Sugar Trust, 22, 77.
 Syndicates, Underwriting, 29.

Tables :

T

Character of ownership of manufacturing establishments, 20.
 Dyeing and finishing in cotton mills, etc., 53.
 Oil prices, 88.
 Scale of Production, 41.

Telephone and Telegraph Company, American, 31.
 Telephones, 15, 16.
 Textile industries (Cotton Goods), 39, 41, 52—55, 58, 81, 83.
 "Times" Book Club, 70.
 Tobacco Company, American, 19, 63, 64, 65, 69, 89.
 Tobacco Company, Imperial, 63.
 Tobacco industry, 41, 89.
 Tobacco Trust, 63, 89, 90.
 Trade marks, 17, 43, 67, 85, 102.
 Trades and Industries : see under "Industries."
 Trading stamps, 19.

U

- Underwriting Syndicates, 29, 30.
United Cigar Stands Company, 64.
United Cigar Stores Company, 19, 46, 64, 89.
United Metals Selling Company, 94.
United Shoe Machinery Company, 39, 72.
United States Steel Corporation, 24, 50, 94.
United States Steel Products Export Company, 94.
Universities, Subjects of study at the, 13, 14, 15.
Universities, Commercial courses at the, 13.
University graduates in commerce and industry, 11, 12.
University students working way through College, 10, 11.
Universities, Colleges, Schools, etc. :
    Brown University, 10.
    Common Schools, 33.
    Harvard University, 11, 34.
    Massachusetts Institute of Technology, 11.
    New York University, 14, 15.
    New York University School of Commerce, 13.
    Oxford & Cambridge Universities, 34.
    Princeton University, 12.
    Yale University, 34.

W

- Wanamaker, John, Philadelphia and New York, 82.
"Watered" stock, 27, 28, 29.
Woollen and Worsted industries, 40, 41, 42, 52, 55, 79, 83.
Woollen Co., American, 84.
Workpeople, The surroundings and conditions of employment of, 32.

Y

- Yale University, 34.

SHERRATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS.

ANATOMICAL SERIES.

No. I. STUDIES IN ANATOMY from the Anatomical Department of the University of Manchester. Vol. iii. Edited by ALFRED H. YOUNG, M.B. (Edin.), F.R.C.S., Professor of Anatomy. Demy 8vo, pp. ix. 289, 23 plates. 10s. net. (Publication No. 10, 1906.)

"All the papers contained in the volume are real additions to the knowledge of the subject with which they deal. For three of the studies Prof. Young is either in part or wholly responsible, and he is to be congratulated on the vigour shown by the Manchester School of Anatomists."—*Nature*.

"This work affords admirable evidence of the virility of our younger British Universities. It is a notable addition to an already notable series."—*Medical Review*.

"This forms the third volume of the Studies in Anatomy issued by the Council, and contains contributions of considerable interest. The volume is well printed and bound. It speaks well for the activity of investigation at Manchester."—*Lancet*.

"The volume is well got up and is evidence of the continuation of the excellent work which has been carried on for so long a period, under Professor A. H. Young's supervision, and has been encouraged and stimulated by his own work."—*British Medical Journal*.

"Throughout the papers, careful research and accurate observation are manifested, and they will repay careful perusal. To the Anatomist, as well as the practical physician or surgeon, they will prove valuable."

—*Edinburgh Medical Journal*.

ECONOMIC SERIES.

No. I. THE LANCASHIRE COTTON INDUSTRY. By S. J. CHAPMAN, M.A., M. Com., Stanley Jevons Professor of Political Economy and Dean of the Faculty of Commerce. Demy 8vo, pp. vii. 309. 7s. 6d. net. (Publication No. 4, 1904.)

"Such a book as this ought to be, and will be, read far beyond the bounds of the trade."—*Manchester Guardian*.

"There have been books dealing with various phases of the subject, but no other has so ably treated it from the economic as well as from the historical point of view."—*Manchester Courier*.

"The story of the evolution of the industry from small and insignificant beginnings up to its present imposing proportions and highly developed and specialised forms, is told in a way to rivet the attention of the reader . . . the book is a valuable and instructive treatise on a fascinating yet important subject."—*Cotton Factory Times*.

"Highly valuable to all close students."—*Scotsman*.

34, Cross Street, Manchester

SHERRATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS.
ECONOMIC SERIES.

(GARTSIDE REPORT, No. 1.)

No. II. COTTON SPINNING AND MANUFACTURING IN THE UNITED STATES OF AMERICA. By T. W. UTTLEY, B.A., Gartside Scholar. Demy 8vo, pp. xii. 70. 1s. net.
(Publication No. 8, 1905.)

"Mr. Uttley is to be congratulated on the performance of a not altogether easy task, and his book, in conception and execution, appears to fulfil admirably the intentions of the Trust."—*Manchester Courier*.

"The writer gives ample details concerning wages and other features connected with typical mills . . . and the information thus gathered is of interest and value to the factory operative as well as the student and economist."—*Cotton Factory Times*.

"Mr. Uttley describes how he visited the mills in various States in a very systematic and detailed manner. Altogether the report makes an admirable and welcome collection of information, and will be found on many occasions worthy of reference."—*Textile Mercury*.

(GARTSIDE REPORT, No. 2.)

No. III. SOME MODERN CONDITIONS AND RECENT DEVELOPMENTS IN IRON AND STEEL PRODUCTIONS IN AMERICA, being a Report to the Gartside Electors, on the results of a Tour in the U.S.A. By FRANK POPPLEWELL, B.Sc., Gartside Scholar. Demy 8vo, pp. vi. 119. 1s. net.
(Publication No. 21, 1906.)

"The author has employed his time well, and has given a clear idea of modern conditions."—*Nature*.

"The American methods of iron and steel production are described, from the practical as well as the statistical side."—*Manchester Courier*.

"Mr. Popplewell writes clearly and well, and he is to be congratulated upon having carried his task through in so entirely a satisfactory manner."—*Manchester City News*.

"America's progress in iron and steel is more wonderful than any bald statistics of production with which we are so familiar can indicate. How that progress has been effected—effected under labour, transport and other difficulties—Mr. Popplewell tells us in an interesting and keenly intelligent review."—*Manchester Guardian*.

"A minute observation of detail . . . characterises the whole work."
—*Iron and Coal Trades Review*.

34, Cross Street, Manchester

SHERRATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS.

ECONOMIC SERIES.

(GARTSIDE REPORT, No. 3.)

No. IV. **ENGINEERING AND INDUSTRIAL CONDITIONS
IN THE UNITED STATES.** By FRANK FOSTER, M.Sc., Gartside
Scholar. Demy 8vo, pp. ix. 106. 1s. net.

(Publication No. 22, 1906.)

"The report under review is of very great interest to those connected with the manufacturing branch of engineering in this country, many of whom will have to relinquish their preconceived notions regarding American methods, if Mr. Foster's conclusions are to be accepted."

—*Electrical Review.*

"The book altogether is very readable, and one we can heartily recommend to all interested in the economics of engineering."

—*The Practical Engineer.*

"Mr. Foster's observation of facts is fresh and interesting . . . the technical side of his report exhibits much care."—*Manchester Guardian.*

"The book is well worth reading."—*Iron and Coal Trades Review.*

"There is much in the book which will be new to English readers, even to those who have studied the reports of the Moseley and other recent 'commissions.'"—*Belfast News Letter.*

No. V. **THE RATING OF LAND VALUES.** By J. D.
CHORLTON, M.Sc. Demy 8vo, pp. viii. 177. 3s. 6d. net.

(Publication No. 23, 1907.)

"A timely and temperate treatise on a subject of growing interest."

—*Pall Mall Gazette.*

"The writer is learned, intelligent, progressive, fair and lucid."

—*Progress.*

"The facts and deductions are well put."—*Western Mail.*

"Chapters upon the scheme of the Royal Commission (minority report) — 'Building Land,' 'The Future Increase of Land Values,' 'The Municipal Bill,' and others . . . set forth with clearness and detail some of the many interesting and difficult subjects in connection with valuation, rates and rating."—*Estates Gazette.*

"Mr. Chorlton has made a contribution to this interesting controversy which is worthy of the serious attention of all persons interested in the subject."—*Local Government Chronicle.*

"The arguments for and against this proposed reform in the taxation of land have never been more fairly and freely stated."

—*Liverpool Daily Post and Mercury.*

"Mr. Chorlton deals clearly and concisely with the whole subject of rating and land values."—*The Standard.*

60, Chandos Street, London, W.C.

SHERATT & HUGHES

**MANCHESTER UNIVERSITY PUBLICATIONS.
ECONOMIC SERIES.**

"The impartiality and candour of Mr. Chorlton's method are beyond dispute, and his book will repay careful study by all who are interested in the question, from whatever motive."—*Westminster Gazette*.

"The first half of this book deserves to become a classic . . . . . is one of the best books on a practical economic question that has appeared for many years. It is not only scientifically valuable, but so well written as to be interesting to a novice on the subject."—*The Nation*.

"This thoughtful and judiciously expressed treatise."

—*Manchester City News*.

"A very businesslike and serviceable collection of essays and notes on this intricate question."—*Manchester Guardian*.

(GARTSIDE REPORT, No. 4.)

No. VI. DYEING IN GERMANY AND AMERICA. By SYDNEY H. HIGGINS, M.Sc., Gartside Scholar. Demy 8vo, pp. xiii. 112. 1s. net. (Publication No. 24, 1907.)

"The book will . . . make a valuable addition to the technical literature of this country."—*Tribune*.

"The work is one which . . . should receive the attention of those who desire a general view of the German and American dyeing industries."—*Textile Manufacturer*.

"A perusal of the work leads us to the conclusion that much useful work is being done by the Gartside scholars, which will give these young men an excellent insight into the working conditions of various industries."—*Textile Recorder*.

No. VII. THE HOUSING PROBLEM IN ENGLAND. By ERNEST RITSON DEWSNUP, M.A., Professor of Railway Economics in the University of Chicago. Demy 8vo, pp. vii. 327. 5s. net. (Publication No. 25, 1907.)

"Mr. Dewsnup's book is most valuable as it provides all essential information on the subject."—*Standard*.

"All those who are interested in this question, no matter what their economic predilections, may ponder with advantage Professor Dewsnup's pages."—*Newcastle Daily Chronicle*.

"The study brings together so weighty an array of facts and arguments that it cannot but prove instructive and suggestive to all classes of economists interested in its subject."—*Scotsman*.

"Professor Dewsnup's view of the whole problem was stated in 1903, in a form which won the Warburton Essay Prize at the Manchester University. Now revised and brought up to date, his valuable work has taken permanent form."—*Westminster Gazette*.

(GARTSIDE REPORT, No. 5.)

No. VIII. AMERICAN BUSINESS ENTERPRISE. By DOUGLAS KNOOP, M.A. Price 1s. 6d. net.

34, Cross Street, Manchester

SHERRATT & HUGHES

**MANCHESTER UNIVERSITY PUBLICATIONS.
EDUCATIONAL SERIES.**

- No. I. CONTINUATION SCHOOLS IN ENGLAND & ELSEWHERE:
Their place in the Educational System of an Industrial and Commercial State. By MICHAEL E. SADLER, M.A., LL.D., Professor of the History and Administration of Education. Demy 8vo, pp. xxvi 779. 8s. 6d. net. (Publication No. 29, 1907).

This work is largely based on an enquiry made by past and present Students of the Educational Department of the University of Manchester. Chapters on Continuation Schools in the German Empire, Switzerland, Denmark, and France, have been contributed by other writers.

HISTORICAL SERIES.

- No. I. MEDIEVAL MANCHESTER AND THE BEGINNINGS
OF LANCASHIRE. By JAMES TAIT, M.A., Professor of Ancient and Mediæval History. Demy 8vo, pp. x. 211. 7s. 6d. net. (Publication No. 3, 1904.)

"Patient and enlightened scholarship and a sense of style and proportion have enabled the writer to produce a work at once solid and readable."—*English Historical Review*.

"A welcome addition to the literature of English local history, not merely because it adds much to our knowledge of Manchester and Lancashire, but also because it displays a scientific method of treatment which is rare in this field of study in England."—Dr. Gross in *American Historical Review*.

"La collection ne pouvait débiter plus significativement et plus heureusement que par un ouvrage d'histoire du Moyen Age dû à M. Tait, car l'enseignement médiévisle est un de ceux qui font le plus d'honneur à la jeune Université de Manchester, et c'est à M. le Professeur Tait qu'il faut attribuer une bonne part de ce succès."—*Revue de Synthèse historique*.

"The two essays are models of their kind."—*Manchester Guardian*.

- No. II. INITIA OPERUM LATINORUM QUAE SAECULIS XIII.,
XIV., XV. ATTRIBUUNTUR. By A. G. LITTLE, M.A., Lecturer in Palæography. Demy 8vo, pp. xiii. 273 (interleaved). 15s. net. (Publication No. 5, 1904.)

"Whoever has attempted to ascertain the contents of a Mediæval miscellany in manuscript must often have been annoyed by the occurrence of a blank space where the title of the treatise ought to be. Mr. Little has therefore earned the gratitude of all such persons by making public a collection of some 6,000 incipits, which he arranged in the first instance for his private use, in compiling a catalogue of Franciscan MSS."—*English Historical Review*.

60, Chandos Street, London, W.C.

SHERRATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS.
HISTORICAL SERIES.

No. III. THE OLD COLONIAL SYSTEM. By GERALD BERKELEY
HERTZ, M.A., B.C.L., Lecturer in Constitutional Law. Demy 8vo,
pp. xi. 232. 5s. net. (Publication No. 7, 1905.)

"Mr. Hertz gives us an elaborate historical study of the old colonial system, which disappeared with the American Revolution. . . . He shows a remarkable knowledge of contemporary literature, and his book may claim to be a true history of popular opinion."—*Spectator*.

"Mr. Hertz's book is one which no student of imperial developments can neglect. It is lucid, fair, thorough, and convincing."

—*Glasgow Herald*.

"Mr. Hertz's 'Old Colonial System' is based on a careful study of contemporary documents, with the result that several points of no small importance are put in a new light . . . it is careful, honest work . . . The story which he tells has its lesson for us."—*The Times*.

"Both the ordinary reader and the academic mind will get benefit from this well-informed and well-written book."—*Scotsman*.

No. IV. STUDIES OF ROMAN IMPERIALISM. By W. T. ARNOLD, M.A. Edited by EDWARD FIDDES, M.A., Lecturer in Ancient History, with Memoir of the Author by Mrs. HUMPHRY WARD and C. E. MONTAGUE. With a Photogravure of W. T. Arnold. Demy 8vo, 400 pp. 7s. 6d. net.
(Publication No. 16, 1906.)

"Mrs. Humphry Ward has used all her delicate and subtle art to draw a picture of her beloved brother; and his friend Mr. Montague's account of his middle life is also remarkable for its literary excellence."—*Athenæum*.

"The memoir . . . tenderly and skilfully written by the 'sister and friend,' tells a story, which well deserved to be told, of a life rich in aspirations, interests, and friendships, and not without its measure of actual achievement."—*Tribune*.

"This geographical sense and his feeling for politics give colour to all he wrote."—*Times*.

"Anyone who desires a general account of the Empire under Augustus which is freshly and clearly written and based on wide reading will find it here."—*Manchester Guardian*.

"Nothing could be better than the sympathetic tribute which Mrs. Humphry Ward pays to her brother, or the analysis of his work and method by his colleague Mr. Montague. The two together have more stuff in them than many big books of recent biography."

—*Westminster Gazette*.

The Memoir may be had separately, price 2s. 6d. net.

34, Cross Street, Manchester

**MANCHESTER UNIVERSITY PUBLICATIONS.
HISTORICAL SERIES.**

No. V. CANON PIETRO CASOLA'S PILGRIMAGE TO JERUSALEM IN THE YEAR 1494. By M. M. NEWETT, B.A., formerly Jones Fellow. Demy 8vo., pp. 427. 7s. 6d. net.
(Publication No. 26, 1907.)

"Thoroughness is characteristic of introduction, the copious notes, appendix and index. . . . Miss Newett's translation is spirited and interesting . . ."—*Manchester Courier*.

"Casola's narrative richly deserved the honours of print and translation. The book is a credit to its editor and to the historical school of Manchester University."—*Morning Leader*.

"His narrative is at once simple and dignified in style, convincing and interesting in its pictures of the conditions governing travel by sea and land four centuries ago."—*Daily Telegraph*.

"The book is like a gallery of mediæval paintings, full of movement and colouring, instinct with the vitality of the time."—*Birmingham Post*.

"Miss Newett's introduction is a contribution of considerable value to the history of European commerce."—*Spectator*.

"Forms a noteworthy addition to the number of books from which a knowledge can be gained of the itineraries of the pilgrims to Palestine."
—*Scotsman*.

"The whole volume is fascinating. It presents a lively picture of bygone times, abounds in curious facts and recalls quaint and pleasing ceremonies, and exhibits the ardent pilgrim of the past in his true light. Miss Newett is alike to be congratulated on her translation, her Introduction (which takes up a third of the volume), and her notes."

—*Manchester City News*.

"The work which Miss Margaret Newett has probably saved from oblivion is as intrinsically interesting as it should prove instructive to the student of history."—*Daily News*.

"One of the most delightful narratives that record the impressions of a pious pilgrim."—*Westminster Gazette*.

"One of the most comprehensive of the itineraries is that now translated, an important feature of it being its full description of the city of Venice."—*The Times*

No. VI. HISTORICAL ESSAYS. Edited by T. F. TOUT, M.A., Professor of Mediæval and Modern History and JAMES TAIT, M.A., Professor of Ancient and Mediæval History. Demy 8vo., pp. xv. 557. 6s. net. Reissue of the Edition of 1902 with Index and New Preface.
(Publication No. 27, 1907.)

"Diese zwanzig chronologisch geordneten Aufsätze heissen in der Vorrede der Herausgeber *Festschrift*, behandeln zur Hälfte ausser-englische

SHERRATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS.

HISTORICAL SERIES.

Themata, benutzen reichlich festländische Literatur und verraten überall neben weiten Ausblicken eine methodische Schöpfung die der dortigen Fachtät hohe Ehre macht." Professor Liebermann in *Deutsche Literaturzeitung*,

"Imperial history, local history, ecclesiastical history, economic history and the methods of historical teaching—all these are in one way or another touched upon by scholars who have collaborated in this volume. Men and women alike have devoted their time and pains to working out problems of importance and often of no slight difficulty. The result is one of which the university and city may be justly proud." The late Professor York Powell in the *Manchester Guardian*.

"Esso contiene venti lavori storici dettati, quattro da professori e sedici da licenziati del Collegio, e sono tutto scritti appositamente e condotti secondo le più rigorose norme della critica e su documenti." R. Predelli in *Nuovo Archivio Veneto*.

"La variété des sujets et l'érudition avec laquelle ils sont traités font grand honneur à la manière dont l'histoire est enseigné à Owens College." *Revue Historique*.

"No one who reads these essays will do so without acknowledging their ability, both in originality and research. They deal with historic subjects from the beginnings of Caesar-worship to the detention of Napoleon at St. Helena, and they deal with them in a thoroughgoing fashion." *Guardian*.

"Par nature, c'est un recueil savant, qui témoigne du respect et de l'émulation que sait exercer pour les études historiques la jeune et déjà célèbre université." *Revue d'histoire ecclésiastique* (Louvain).

"All these essays reach a high level; they avoid the besetting sin of most of our present historical writing, which consists of serving up a hash of what other historians have written flavoured with an original spice of error. . . . They are all based on original research and written by specialists." Professor A. F. Pollard in the *English Historical Review*.

"Sie bilden einen schönen Beweis für die rationelle Art, mit der dort dieses Studium betrieben wird." Professor O. Weber in *Historische Zeitschrift*.

The Index can be purchased separately, price 6d.

34, Cross Street, Manchester

MANCHESTER UNIVERSITY PUBLICATIONS.
MEDICAL SERIES.

No. I. SKETCHES OF THE LIVES AND WORK OF THE
HONORARY MEDICAL STAFF OF THE ROYAL INFIRMARY.
From its foundation in 1752 to 1830, when it became the Royal
Infirmary. By EDWARD MANSFIELD BROCKBANK, M.D., M.R.C.P.
Crown 4to. (illustrated). Pp. vii. 311. 15s. net.

(Publication No. 1, 1904.)

"Dr. Brockbank's is a book of varied interest. It also deserves a
welcome as one of the earliest of the 'Publications of the University of
Manchester.'"—*Manchester Guardian*.

"We have a valuable contribution to local Medical Literature."

—*Daily Dispatch*.

No. II. PRACTICAL PRESCRIBING AND DISPENSING. For
Medical Students. By WILLIAM KIRKBY, sometime Lecturer in
Pharmacognosy in the Owens College, Manchester. Crown 8vo,
220 pp. 5s. net.

(Publication No. 2, 1904, Second edition, 1906.)

"The whole of the matter bears the impress of that technical skill
and thoroughness with which Mr. Kirkby's name must invariably be
associated, and the book must be welcomed as one of the most useful
recent additions to the working library of prescribers and dispensers."

—*Pharmaceutical Journal*.

"Thoroughly practical text-books on the subject are so rare, that we
welcome with pleasure Mr. William Kirkby's 'Practical Prescribing and
Dispensing.' The book is written by a pharmacist expressly for medical
students, and the author has been most happy in conceiving its scope
and arrangement."—*British Medical Journal*.

"The work appears to be peculiarly free from blemishes and particularly
full in practical detail. It is manifestly the work of one who is a skilled
chemist, and an expert pharmacist, and who knows not only the re-
quirements of the modern student but the best way in which his needs
may be met."—*Medical Press*.

"This is a very sensible and useful manual."—*The Hospital*.

"The book will be found very useful to any students during a course
of practical dispensing."—*St. Bartholomew's Hospital Journal*.

"The book is a model, being tutorial from beginning to end."

—*The Chemist and Druggist*.

No. III. HANDBOOK OF SURGICAL ANATOMY. By G. A
WRIGHT, B.A., M.B. (Oxon.), F.R.C.S., Professor of Systematic
Surgery, and C. H. PRESTON, M.D., F.R.C.S., L.D.S., Lecturer on
Dental Anatomy; Assistant Dental Surgeon to the Victoria Dental
Hospital of Manchester. Crown 8vo, pp. ix. 205. Second edition.
5s. net.

(Publication No. 6, 1905.)

MANCHESTER UNIVERSITY PUBLICATIONS.

MEDICAL SERIES.

"We can heartily recommend the volume to students, and especially to those preparing for a final examination in surgery."—*Hospital*.

"Dr. Wright and Dr. Preston have produced a concise and very readable little handbook of surgical applied anatomy. . . . The subject matter of the book is well arranged and the marginal notes in bold type facilitate reference to any desired point."—*Lancet*.

No. IV. A COURSE OF INSTRUCTION IN OPERATIVE SURGERY in the University of Manchester. By WILLIAM THORBURN, M.D., B.S. (Lond.), F.R.C.S., Lecturer in Operative Surgery. Crown 8vo, pp. 75. 2s. 6d. net.

(Publication No. 11, 1906.)

"This little book gives the junior student all that he wants, and nothing that he does not want. Its size is handy, and altogether for its purpose it is excellent."—*University Review*.

"As a working guide it is excellent."—*Edinburgh Medical Journal*.

No. V. A HANDBOOK OF LEGAL MEDICINE. By W. SELLARS, M.D. (London), of the Middle Temple and Northern Circuit, Barrister-at-law. With Illustrations. Crown 8vo, pp. vii. 233. 7s. 6d. net.

(Publication No. 14, 1906.)

"This is quite one of the best books of the kind we have come across."—*Law Times*.

No. VI. A CATALOGUE OF THE PATHOLOGICAL MUSEUM OF THE UNIVERSITY OF MANCHESTER. Edited by J. LORRAIN SMITH, M.A., M.D. (Edin.), Professor of Pathology. Crown 4to, 1260 pp. 7s. 6d. net.

(Publication No. 15, 1906.)

"The catalogue compares very favourably with others of a similar character, and, apart from its value for teaching purposes in an important medical school such as that of the University of Manchester, it is capable of being of great assistance to others as a work of reference."

—*Edinburgh Medical Journal*.

"In conclusion we need only say that Professor Lorrain Smith has performed the most essential part of his task—the description of the specimens—excellently, and an honourable mention must be made of the book as a publication."—*British Medical Journal*.

No. VII. HANDBOOK OF DISEASES OF THE HEART. By GRAHAM STEELL, M.D., F.R.C.P., Professor of Medicine, and Physician to the Manchester Royal Infirmary. Crown 8vo, pp. xii. 389, 11 plates (5 in colours), and 100 illustrations in the text. 7s. 6d. net.

Publication No. 20, 1906.)

SHERATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS.

MEDICAL SERIES.

"It more truly reflects modern ideas of heart disease than any book we are acquainted with, and therefore may be heartily recommended to our readers."—*Treatment*.

"We regard this volume as an extremely useful guide to the study of diseases of the heart, and consider that no better introduction to the subject could possibly have been written."—*Medical Times and Hospital Gazette*.

"We can cordially recommend Dr. Steell's book as giving an excellent and thoroughly practical account of the subject of which it treats."—*Edinburgh Medical Review*.

PHYSICAL SERIES.

No. I. THE PHYSICAL LABORATORIES OF THE UNIVERSITY OF MANCHESTER. A record of 25 years' work. Demy 8vo, pp. 142, 10 Plates, 4 Plans. 5s. net. (Publication No. 13, 1906.)

This volume contains an illustrated description of the Physical, Electrical Engineering, and Electro-Chemistry Laboratories of the Manchester University, also a complete Biographical and Bibliographical Record of those who have worked in the Physics Department of the University during the past 25 years.

"The book is excellently got up, and contains a description of the department of physics and its equipment, a short biographical sketch of the Professor with a list of his scientific writings and a well-executed portrait and a record of the career of students and others who have passed through Dr. Schuster's hands. Alumni of Owens will welcome the volume as an interesting link with their alma mater."—*Glasgow Herald*.

"This interesting and valuable contribution to the history of the Manchester University also contains several illustrations, and forms the first of the "physical series" of the publications of the University of Manchester."—*The Times*

"A record of achievement of which no man need be ashamed"—*Westminster Gazette*.

"It is a memorial of which any man would be justly proud, and the University of which he is both an alumnus and a professor may well share that pride."—*Manchester Guardian*.

PUBLIC HEALTH SERIES.

No. I. ARCHIVES OF THE PUBLIC HEALTH LABORATORY OF THE UNIVERSITY OF MANCHESTER. Edited by A. SHERIDAN DELÉPINE, M.Sc., M.B., Ch.M., Director of the Laboratory and Procter Professor of Comparative Pathology and Bacteriology. Crown 4to, pp. iv. 451. £1. 1s. net.

(Publication No. 12, 1906.)

60, Chandos Street, London, W.C.

MANCHESTER UNIVERSITY PUBLICATIONS
PUBLIC HEALTH SERIES.

"The University of Manchester has taken the important and highly commendable step of commencing the publication of the archives of its Public Health Laboratory, and has issued, under the able and judicious editorship of Professor Sheridan Delépine, the first volume of a series that promises to be of no small interest and value alike to members of the medical profession and to those of the laity. . . . Original communications bearing upon diseases which are prevalent in the districts surrounding Manchester, or dealing with food- and water-supplies, air, disposal of refuse, sterilisation and disinfection and kindred subjects, will be published in future volumes; and it is manifest that these, as they successively appear, will form a constantly increasing body of trustworthy information upon subjects which are not only of the highest interest to the profession but of supreme importance to the public."—

The Lancet.

"It is safe to say that as these volumes accumulate they will form one of the most important works of reference on questions of public health, and ought, at all events, to be in the library of every public authority."—*Manchester Guardian.*

"The volume . . . speaks well for the activity of investigation in Manchester."—*Lancet.*

THEOLOGICAL SERIES.

No. I. INAUGURAL LECTURES delivered during the Session 1904-5, by the Professors and Lecturers of the Faculty of Theology, viz. :—

Prof. T. F. Tout, M.A.; Prof. A. S. Peake, B.D.; Prof. H. W. Hogg, M.A.; Prof. T. W. Rhys Davids, LL.D.; Rev. W. F. Adeney, D.D.; Rev. A. Gordon, M.A.; Rev. L. Hassé, B.D.; Rev. Canon E. L. HICKS, M.A.; Rev. H. D. Lockett, M.A.; Rev. R. Mackintosh, D.D.; Rev. J. T. Marshall, D.D.; Rev. J. H. Moulton, D.Litt.

Edited by A. S. PEAKE, B.D., Dean of the Faculty.

Demy 8vo, pp. xi. 296. 7s. 6d. net.

(Publication No. 9, 1905.)

"The lectures, while scholarly, are at the same time popular, and will be found interesting and instructive by those who are not theologians. . . . The entire series is excellent, and the volume deserves a wide circulation."—*Scotsman.*

"This is a very welcome volume . . . All these lectures were delivered to popular audiences, yet they are far from superficial, and will be found of great value to busy pastors and teachers."—*Christian World.*

"We welcome the volume as a most auspicious sign of the times."

—*Spectator.*

SHERRATT & HUGHES

**MANCHESTER UNIVERSITY PUBLICATIONS.
THEOLOGICAL SERIES.**

"The lectures themselves give a valuable conspectus of the present position of Theological research. . . . They are, of course, not addressed to experts, but they are exceedingly valuable, even when allowance is made for their more or less popular form."—*Examiner*.

"The whole volume forms a very important and valuable contribution to the cause of Theological learning."—*Record*.

"This is a most interesting and valuable book, the appearance of which at the present moment is singularly significant. . . . But it is impossible in a brief review to indicate all the treasures of this rich volume, to read which carefully is to be introduced to the varied wealth of modern Biblical scholarship."—*Baptist*.

"This volume is of the most exceptional value and interest."

—*Expository Times*.

"This is a book of more than common interest."

—*Review of Theology and Philosophy*.

"The writers of these lectures do not attempt to offer more than samples of their wares: but what is given is good, and it may be seen that theology without tests is destitute neither of scientific value nor of human interests."—*Athenaeum*.

LECTURES.

No. I. GARDEN CITIES (Warburton Lecture). By RALPH NEVILLE,
K.C. 6d. net. (Lecture No. 1, 1905.)

No. II. THE BANK OF ENGLAND AND THE STATE (A Lecture).
By Sir FELIX SCHUSTER. 6d. net. (Lecture No. 2, 1905.)

No. III. BEARING AND IMPORTANCE OF COMMERCIAL
TREATIES IN THE TWENTIETH CENTURY. By Sir THOMAS
BARCLAY. 6d. net. (Lecture No. 3, 1906.)

No. IV. THE SCIENCE OF LANGUAGE AND THE STUDY OF
THE GREEK TESTAMENT (A Lecture). By JAMES HOPE
MOULTON, M.A., Litt.D. 6d. net. (Lecture No. 4, 1906.)

No. V. THE GENERAL MEDICAL COUNCIL: ITS POWERS
AND ITS WORK (A Lecture). By DONALD MACALISTER, M.A.,
M.D., B.Sc., D.C.L., LL.D. 6d. net.
(Lecture No. 5, 1906.)

No. VI. THE CONTRASTS IN DANTE (A Lecture). By the Hon.
WILLIAM WARREN VERNON, M.A. 6d. net.
(Lecture No. 6, 1906.)

No. VII. THE PRESERVATION OF PLACES OF INTEREST OR
BEAUTY (A Lecture). By Sir ROBERT HUNTER. 6d. net.
(Lecture No. 7, 1907.)

60, Chandos Street, London, W.C.

SHERRATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS. CALENDARS.

- CALENDAR OF THE VICTORIA UNIVERSITY OF MANCHESTER. Session 1904-5. Demy 8vo, 1100 pp. 3s. net.
(Publication No. 17.)
- CALENDAR OF THE VICTORIA UNIVERSITY OF MANCHESTER. Session 1905-6. Demy 8vo, 1200 pp. 3s. net.
(Publication No. 18.)
- CALENDAR OF THE VICTORIA UNIVERSITY OF MANCHESTER. Session 1906-7. Demy 8vo, 1300 pp. 3s. net.
(Publication No. 19.)
- CALENDAR OF THE VICTORIA UNIVERSITY OF MANCHESTER. Session 1907-8. Demy 8vo, 1400 pp. 3s. net.
(Publication No. 28.)
-

The following are in preparation and will be issued shortly :—

Celtic Series. No. I.

AN INTRODUCTION TO EARLY WELSH. By the late Prof. J. STRACHAN, M.A., LL.D. Demy 8vo.

This work will comprise a Grammar of Early Welsh with special reference to Middle-Welsh prose. To the grammar will be added selected passages from Early Welsh texts in prose and verse, together with notes and a vocabulary. *[In the Press.]*

A GLOSSARY TO THE BLACK BOOK OF CHIRK MANUSCRIPT OF THE WELSH LAWS. By TIMOTHY LEWIS, B.A. Demy 8vo.

This will include the oldest copy of a complete glossary to the "Laws of Howel Dda," contained in the "Black Book of Chirk," and will be based on the photographic facsimile of that manuscript which is about to be published by Dr. J. Gwenogvryn Evans in his collection of Welsh texts. *[In Preparation.]*

Classical Series.

A STUDY OF THE BACCHAE OF EURIPIDES. By G. NORWOOD, M.A., Assistant Lecturer in Classics. Demy 8vo. *[In the Press.]*

Educational Series.

THE DEMONSTRATION SCHOOL RECORD. No. I. Being Contributions to the Study of Education from the Department of Education in the University of Manchester. By Professor J. J. FINDLAY. *[In the press.]*

THE TEACHING OF HISTORY IN GIRLS' SCHOOLS IN NORTH AND CENTRAL GERMANY. A Report by E. DODGE, M.A. *[In the Press.]*

SHERRATT & HUGHES

MANCHESTER UNIVERSITY PUBLICATIONS.

Historical Series.

HANES GRUFFYDD AP CYNAN. The Welsh text with translation, introduction, and notes by ARTHUR JONES, M.A., Jones Fellow in History. Demy 8vo. *[In Preparation.]*

THE CROMWELLIAN CONQUEST AND SETTLEMENT OF IRELAND. By ROBERT DUNLOP, M.A., formerly Berkeley Fellow. Demy 8vo.

This work will consist of a series of unpublished documents relating to the History of Ireland from 1651 to 1659, arranged, modernized, and edited, with introduction, notes, etc., by Mr. DUNLOP.

[In Preparation.]

Medical Series.

DISEASES OF THE EAR. By W. MILLIGAN, M.D., Lecturer on Diseases of the Ear and Nasal Surgeon to the Manchester Royal Infirmary. *[In Preparation.]*

DISEASES OF THE EYE. By C. E. GLASCOTT, M.D., Lecturer on Ophthalmology, and A. HILL GRIFFITH, M.D., Ophthalmic Surgeon to the Manchester Royal Infirmary. *[In Preparation.]*

HANDBOOK OF NERVOUS DISEASES. By JUDSON S. BURY, M.D. Lecturer on Clinical Neurology and Physician to the Manchester Royal Infirmary. *[In Preparation.]*

The following works, though not technically Publications of the University of Manchester, are also issued from the University Press :—

MELANDRA CASTLE, being the Report of the Manchester and District Branch of the Classical Association for 1905. Edited by R. S. CONWAY, Litt.D. Introduction by Rev. E. L. HICKS, M.A. Demy 8vo. Illustrated. 5s. net.

TRANSACTIONS OF THE INTERNATIONAL UNION FOR CO-OPERATION IN SOLAR RESEARCH (Vol. i., First and Second Conferences). Demy 8vo, 260 pp. and plate. 7s. 6d. net.

THE BOOK OF RUTH (Unpointed Text). 6d. net.

SCENES FROM THE *RUDEUS* OF PLAUTUS, with a Translation into English Verse. Edited by R. S. CONWAY, Litt.D., Professor of Latin in the University. 6d. net.

60, Chandos Street, London, W.C.

SHERRATT & HUGHES

THE TEACHING OF HISTORY AND OTHER PAPERS. By H.

L. WITHERS. Edited by J. H. FOWLER. Crown 8vo, 270 pp.
4s. 6d. net.

"An interesting memorial of a teacher who was a real enthusiast for education."—*The Times*.

"We can cordially commend this little book to the somewhat limited but slowly widening circle who are likely to be interested in educational principles and organization."—*The Guardian*.

A TARDINESS IN NATURE AND OTHER PAPERS. By MARY CHRISTIE. Edited, with Introductory Note and Memoir, by MAUD WITHERS. Crown 8vo, 331 pp. 3s. net.

"The essays upon Thackeray, George Eliot, and R. L. Stevenson in this volume could scarcely be bettered."—*The Guardian*.

"The life-story of a quite remarkable woman—of a woman who used her gifts always to the furthering of all that is sweetest and noblest in life."—*Tribune*.

MUSICAL CRITICISMS. By ARTHUR JOHNSTONE. With a Memoir of the Author by HENRY REECE and OLIVER ELTON. Crown 8vo, 225 pp. 5s. net.

"Without the smallest affectation or laboured attempts at smartness, Mr. Johnstone contrived always to throw fresh light on the matter in hand, and at the same time to present his opinions in a form which could be understood and enjoyed by the non-musical reader."—*Westminster Gazette*.

"Everyone who welcomes guidance as to what is best in music, everyone who watches with some degree of fascination the power of analysis, everyone who reads with a sense of satisfaction English, as it may be written by a master of the craft, should read this book."—*The Musical World*.

MANCHESTER BOYS. By C. E. B. RUSSELL. With an Introduction by E. T. CAMPAGNAC. Crown 8vo. 2s. 6d. net.

"Mr. Charles E. B. Russell has written a most interesting and thought-compelling book on a subject of almost vital importance."—*Yorkshire Post*.

"Altogether it is an inspiring book."—*Liverpool Daily Post and Mercury*.

34, Cross Street, Manchester

THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW

AN INITIAL FINE OF 25 CENTS

WILL BE ASSESSED FOR FAILURE TO RETURN
THIS BOOK ON THE DATE DUE. THE PENALTY
WILL INCREASE TO 50 CENTS ON THE FOURTH
DAY AND TO \$1.00 ON THE SEVENTH DAY
OVERDUE.

DEC 19 1939

NOV 11 1947

21 Mar '58 JT

REC'D LD

MAR 7 1953

H31
V5
V.8

63889